



Docket	:	A.15-07-015
Exhibit Number	:	ORA - _____
Commissioner	:	Catherine Sandoval
Administrative Law Judge	:	Jeanne McKinney
ORA Witness	:	Brian Yu



ORA
OFFICE OF RATEPAYER ADVOCATES



OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

***** PUBLIC VERSION (redacted)*****

**REPORT ON PLANT
FOR ANTELOPE VALLEY, DOMINGUEZ, EAST LOS
ANGELES, HERMOSA REDONDO, PALOS VERDES, &
WESTLAKE DISTRICTS**

**California Water Service Company
Test Year 2017 General Rate Case
A.15-07-015**

**San Francisco, California
March 2016**

MEMORANDUM

This Report on Plant for California Water Service Company GRC A.15-07-015 is prepared by Brian Yu of the *Office of Ratepayer Advocates (ORA) - Water Branch*, and under the general supervision of Program Manager Danilo Sanchez, and Program & Project Supervisor and Ting-Pong Yuen. Mr. Yu's Statement of Qualifications is in Chapter 7 of ORA's Company-Wide Report on Results of Operations. Kerriann Sheppard and Christa Salo serve as ORA legal counsels.

**Report on Plant for Antelope Valley, Dominguez,
East Los Angeles, Hermosa Redondo, Palos Verdes, and
Westlake Districts**

Table of Contents

Chapter 1: EXECUTIVE SUMMARY	1
A. INTRODUCTION	1
B. RECOMMENDATIONS	1
Chapter 2: Plant – Antelope Valley District	2
A. INTRODUCTION	2
B. SUMMARY OF RECOMMENDATIONS	2
C. DISCUSSION	5
1. Specific Projects	5
a. Groundwater Supply Study (PID 98536)	5
b. Vehicle Replacements (PIDs 99100 & 99108)	10
c. Pipeline Replacement Program (PIDs 129MRP16, 129MRP17 & 129MRP18)	10
d. Meter Replacement Program (PID AVD900)	11
2. Non-Specific Budgets for 2016-2018	11
3. 2015 Capital Budget	11
D. CONCLUSION	12
Chapter 3: Plant – Dominguez District	13
A. INTRODUCTION	13
B. SUMMARY OF RECOMMENDATIONS	13
C. DISCUSSION	18
1. Specific Projects	18
a. Pipeline Replacement Program (PIDs 99209, 99210, & 99211)	18

b. Advanced Metering Infrastructure (AMI) (PIDs 99162, 99173 & 99183)...	19
c. Meter Replacement Program (PID DOM900)	19
d. Replace Fire Hydrants and Valves (PIDs 98396, 98397 & 98399)	20
e. Replace SCADA Software and Hardware (PID 99167)	22
f. Station 203 Rebuild Design (Phase I) (PID 98415)	22
g. New West Basin Wells & Treatment Facilities (PIDs 100482, 98333, 98334, 99341, 99522 & 101018)	30
2. Non-Specific Budgets for 2016-2018	44
3. 2015 Capital Budget	44
D. CONCLUSION	44
Chapter 4: Plant – Rancho Dominguez	45
A. INTRODUCTION	45
B. SUMMARY OF RECOMMENDATIONS	45
C. DISCUSSION	46
1. Specific Projects	47
a. Convert Media Center to Emergency Operation Center (PID 98464)	47
b. Vehicle Replacement (PIDs 99216, 99220 & 99222)	51
c. Additional Vehicles (PIDs 99419 & 99460)	51
i. Additional Valve Truck (PID 99419)	51
ii. New Vacuum Truck (PID 99460)	52
iii. Vehicle Maintenance Expense	54
2. Non-Specific Budgets for 2016-2018	54
3. 2015 Capital Budget	55
D. CONCLUSION	55
Chapter 5: Plant – East Los Angeles District	56
A. INTRODUCTION	56
B. SUMMARY OF RECOMMENDATIONS	56
C. DISCUSSION	61
1. Specific Projects	61
a. Pipeline Replacement Program (PIDs 99339, 99342, & 99344)	61

b. Pumping Equipment Replacement (PID 97712).....	62
c. Control Valve Replacements (PIDs 98534 & 98537).....	63
d. Panelboard and Generator Replacement (PID 97796).....	63
i. Panelboard Replacement.....	63
ii. Generator Replacement.....	67
e. ELA 061-T1 and ELA 012-T2 Replace Roof (PIDs 97942 and 97943)	70
f. Install 20” DI to Distribute Groundwater (PID 98653 and 98662)	72
g. Wells 62-01/02 Equip Wells and Treatment System (PID 98667).....	72
h. Retire Station 16 and Install Assets at Station 42 (PID 98671 and 97577) ..	76
i. Tubeway Phase 2 – Improvements (PID 99374)	78
j. Various Copier Replacements.....	80
k. Vehicle Replacements (PIDs 99131, 99133 & 99134)	81
2. Non-Specific Budgets for 2016-2018	82
3. 2015 Capital Budget.....	82
D. CONCLUSION.....	82
Chapter 6: Plant – Hermosa Redondo District.....	83
A. INTRODUCTION	83
B. SUMMARY OF RECOMMENDATIONS	83
C. DISCUSSION	86
1. Specific Projects.....	87
a. Pipeline Replacement Program (PIDs 99212, 99214 & 99215)	87
b. Meter Replacement Program (PID HRD0900).....	88
c. Replace Wrought Iron Fence at Station 9 (PID 99231)	88
d. Replace SCADA Software and Hardware (PID 99169)	91
e. HR Station 9 Seismic Retrofit (PID 97749)	91
f. HR Station 23 Seismic Retrofit (PID 97754 & 98025)	93
g. Station 24 Rebuild (PID 97756)	94
i. Pump Efficiency.....	94
ii. Tanks.....	96
iii. Hydro-Pneumatic Tanks	97

iv. Station Piping.....	97
h. Station 27 Pump House Replacement (PID 97642).....	97
i. Station 30 Well Treatment (PID 98446).....	100
j. Purchased Water Connection – MWD Secondary Feeder (PID 101730)...	101
2. Non-Specific Budgets for 2016-2018	102
3. 2015 Capital Budget.....	102
D. CONCLUSION.....	103
Chapter 7: Plant – Palos Verdes.....	104
A. INTRODUCTION	104
B. SUMMARY OF RECOMMENDATIONS	104
C. DISCUSSION	109
1. Specific Projects.....	109
a. Pipeline Replacement Program (PID 99352, 99353 & 99354).....	109
b. Advanced Metering Infrastructure (AMI) (PIDs 99184, 99185 & 99186).....	110
c. Meter Replacement Program (PID PVD900)	110
d. Generator Replacement – PV Station 38 (PID 99480)	111
e. Control Valve Replacement (PIDs 98616, 98618 & 98620)	115
f. Pump and Motor Replacement (PIDs 98133, 98144 & 98156).....	115
g. Station 4 Pump Replacement (PID 98224).....	116
h. Replace SCADA Software and Hardware (PID 99174)	118
i. Reservoir 7 Restoration – PV Station 43 (PID 97421).....	119
j. PV Station 37 T1 Tank Structural Improvement (PIDs 97946, 97948 & 97600)	120
k. Reservoir 11 Restoration – PV Station 45 (PID 97563).....	122
l. P-Cascade Feasibility Study (PID 98227)	124
m. Crenshaw/Ridge Supply & D-500 Pipeline Project (PIDs 98326 & 98328).....	126
i. 27-inch Pipeline Vulnerability (Ridge System)	127
ii. Power Outages (Ridge System)	130
iii. Storage Deficit (Ridge System).....	130
iv. Supply Inefficiency (Ridge System).....	131

v. 20-inch Transmission Main – Access, Reliability and Liability Concerns (D-500 System).....	131
2. Non-Specific Budgets for 2016-2018	132
3. 2015 Capital Budget.....	133
D. CONCLUSION.....	133
Chapter 8: Plant – Westlake District.....	134
A. INTRODUCTION	134
B. SUMMARY OF RECOMMENDATIONS	134
C. DISCUSSION	136
1. Specific Projects.....	137
a. Pipeline Replacement Program (PIDs 123MRP16, 17 & 18).....	137
b. Meter Replacement Program (PID WLK900)	137
c. Station 011 Smokey Ridge Replace Hydro Pneumatic Tank (PID 98244)	138
d. Emergency Interconnect with the City of Thousand Oaks at Westlake Blvd and Allyson Court (PID 97518).....	141
e. Install 6-inch Reclaimed Water Pipeline extension to serve Triunfo Community Park (PID 97523).....	142
f. Relocate Fire Hydrants for Street Widening (PID 102937).....	143
g. District Office improvements phase 2 (PID 98176)	143
i. Update Restrooms per ADA Requirement	144
ii. Updating Lighting Fixtures.....	144
iii. Bullet Proofing per Cal Water Standards	144
iv. New Lobby Storefront	145
v. Four Card Readers	145
vi. Power and Audio Visual Work.....	146
h. Replace the SCADA system server and software.....	146
i. Vehicle Replacement (PIDs 99258 & 99259)	146
2. Non-Specific Budgets for 2016-2018	147
3. 2015 Capital Budget.....	147
D. CONCLUSION.....	147

Chapter 9: Various Coating Replacements for Existing Tank Infrastructure (Tank Coating).....	148
A. INTRODUCTION	148
B. SUMMARY OF RECOMMENDATIONS	148
C. DISCUSSION	148
CHAPTER 10: East Los Angeles Memorandum Account	152
A. INTRODUCTION	152
B. SUMMARY OF RECOMMENDATIONS	152
C. DISCUSSION	152
1. Preliminary Statement AQ – East Los Angeles Memo Account (“ELA MA”).....	152
a. CWS’s Request on Amortization of the Accrued Carrying Costs in ELA MA.....	153
D. CONCLUSION.....	159
CHAPTER 11: SPECIAL REQUEST #7- Inclusion of Construction Work in Progress (CWIP) in Rate Base.....	160
A. INTRODUCTION	160
B. SUMMARY OF RECOMMENDATIONS	160
C. DISCUSSION	160

Chapter 1: EXECUTIVE SUMMARY

A. INTRODUCTION

This report presents ORA's analysis and recommendations on Plant in Service for the Antelope Valley, Dominguez, East Los Angeles, Hermosa Redondo, Palos Verdes, and Westlake districts in General Rate Case Application (A.) 15-07-015 filed by California Water Service Company ("Cal Water" or "CWS"). The recommendations herein also reflect recommendations in ORA's Report on Plant – Common Issues which address issues affecting plant estimates for most or all CWS's districts.

B. RECOMMENDATIONS

Table 1-A below provides a summary of recommended capital budgets for the districts covered in this report. Chapters Two through Seven of this report present plant analysis and recommendations for Antelope Valley, Dominguez, East Los Angeles, Hermosa Redondo, Palos Verdes, and Westlake districts, respectively.

Table 1-A: Capital Budget Summary - ORA's Recommended Plant Additions

ORA Estimates (\$000)	2015	2016	2017	2018	Annual Average
Antelope Valley	\$ 151.4	\$ 78.2	\$ 37.6	\$ 53.6	\$ 80.2
Dominguez	\$ 4,553.0	\$ 4,025.7	\$ 2,160.4	\$ 1,995.2	\$ 3,183.6
East Los Angeles	\$ 7,297.3	\$ 2,260.1	\$ 2,648.1	\$ 2,785.4	\$ 3,747.7
Hermosa Redondo	\$ 466.8	\$ 1,097.4	\$ 1,117.8	\$ 1,654.6	\$ 1,084.1
Palos Verdes	\$ 4,535.3	\$ 1,551.1	\$ 1,339.1	\$ 1,484.5	\$ 2,227.5
Westlake	\$ 307.5	\$ 944.4	\$ 490.4	\$ 513.3	\$ 563.9
Rancho Dominguez	\$ 76.2	\$ 325.6	\$ 194.7	\$ 324.9	\$ 230.3

Chapter 2: Plant – Antelope Valley District

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Antelope Valley District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 2-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding vehicle replacement, pipeline replacement program, meter replacement program, 2016- - specific budget and 2015 capital budget. **Table 2-B** presents ORA project-specific adjustments.

Table 2-A: Capital Budget Summary – Antelope Valley District

Antelope Valley (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 151.4	\$ 78.2	\$ 37.6	\$ 53.6	\$ 80.2
CWS	\$ 601.3	\$ 503.0	\$ 309.6	\$ 481.7	\$ 473.9
CWS > ORA	\$ 449.9	\$ 424.8	\$ 272.0	\$ 428.0	\$ 393.7
ORA as % of CWS	25%	16%	12%	11%	16%

1

Table 2-B: Capital Budget Details – Antelope Valley District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00061954	Replace Interior Safety Climb - Sta. 1 Tank 3 - Lancaster	\$ 3,255	\$ 3,282	\$ 27	99%
	00063495	Field - Large Power Tools including Jackhammers, Air Tools, & Metal Pipe Locators	\$ -	\$ 6,120	\$ 6,120	0%
	00064110	Seismic Retrofit - Sta. 5 Tank 1 - Leona Valley System	\$ -	\$ 86,847	\$ 86,847	0%
	00075615	Replace Pump & motor. Existing equipment leaks and is not VFD compatible.	\$ -	\$ 103,800	\$ 103,800	0%
	AVD0900	Meter Replacement Program	\$ -	\$ 6,707	\$ 6,707	0%
Specifics Total			\$ 3,255	\$ 206,756	\$ 203,501	2%
Non-Specifics Total			\$ 20,297	\$ 92,500	\$ 72,203	22%
Carry-Overs Total			\$ 127,828	\$ 302,017	\$ 174,189	42%
TOTAL 2015			\$ 151,380	\$ 601,272	\$ 449,892	25%

2

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00098536	Conduct groundwater supply study to evaluate prime well locations and evaluate other supply alternatives for the Leona Valley system	\$ -	\$ 88,076	\$ 88,076	0%
	00099905	The 2016 main replacement program will replace 792 feet of pipelines in the Antelope Valley district at an estimated cost of \$156	\$ 35,841	\$ 184,196	\$ 148,355	19%
	AVD0900	Meter Replacement Program	\$ 885	\$ 10,302	\$ 9,417	9%
	00099100	Vehicle Replacements > 120,000 miles	\$ 41,521	\$ 112,543	\$ 71,022	37%
Specifics Total			\$ 78,247	\$ 395,117	\$ 316,870	20%
Non-Specifics Total			\$ -	\$ 107,900	\$ 107,900	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2016			\$ 78,247	\$ 503,017	\$ 424,770	16%

1

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099906	The 2017 main replacement program will replace 792 feet of pipelines in the Antelope Valley district at an estimated cost of \$156	\$ 36,686	\$ 188,801	\$ 152,115	19%
	AVD0900	Meter Replacement Program	\$ 906	\$ 10,560	\$ 9,654	9%
	00099100	Vehicle Replacements > 120,000 miles	\$ 71,022	\$ -	\$ (71,022)	-
Specifics Total			\$ 37,592	\$ 199,361	\$ 161,769	19%
Non-Specifics Total			\$ -	\$ 110,200	\$ 110,200	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2017			\$ 37,592	\$ 309,561	\$ 271,969	12%

2

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099108	2018 Vehicle Replacement Program Vehicle Replacements > 120,000 miles	\$ -	\$ 149,235	\$ 149,235	0%
	00099907	The 2018 main replacement program will replace 792 feet of pipelines in the Antelope Valley district at an estimated cost of \$156	\$ 37,523	\$ 193,521	\$ 155,998	19%
	AVD0900	Meter Replacement Program	\$ 927	\$ 10,824	\$ 9,897	9%
	00097944	Replace rafters and install CWS standard insect screen on overflow.	\$ 15,182	\$ 15,182	\$ -	100%
Specifics Total			\$ 53,632	\$ 368,762	\$ 315,130	15%
Non-Specifics Total			\$ -	\$ 112,900	\$ 112,900	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2018			\$ 53,632	\$ 481,662	\$ 428,030	11%

3

C. DISCUSSION

The Antelope Valley District recorded \$1,123,700 per year in average gross plant additions for the most recent six-year period 2009-2014.¹ **Table 2-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

Table 2-C: Capital Budget Summary vs. Recorded Expenditures– Antelope Valley District

Antelope Valley (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 1,123.7	100%
ORA	\$ 151.4	\$ 78.2	\$ 37.6	\$ 53.6	\$ 80.2	7%
CWS	\$ 601.3	\$ 503.0	\$ 309.6	\$ 481.7	\$ 473.9	42%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 non-specific projects (Section 2), and 2015 capital budget (Section 3) below.

1. **Specific Projects**

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Groundwater Supply Study (PID 98536)

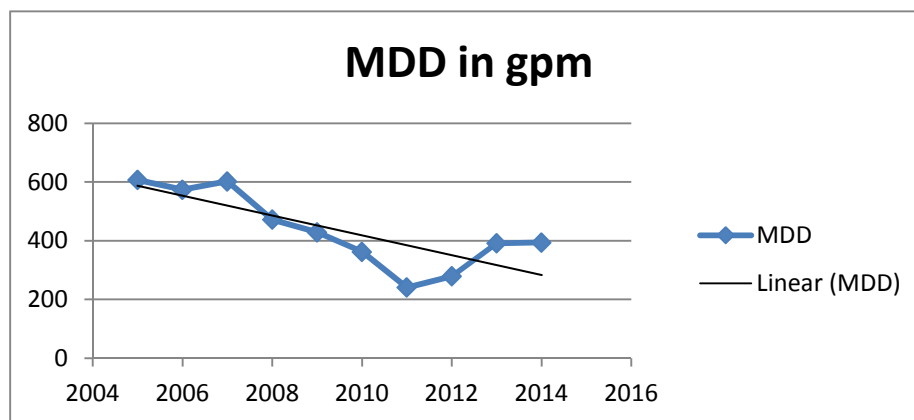
CWS requests \$88,076 in 2016 to fund a groundwater supply study for its Leona Valley System in the Antelope Valley district. CWS's project justification states that 90% of Leona Valley's Maximum Day Demand (MDD) of 600 gpm is supplied by purchased water from the Antelope Valley East Kern Water Agency (AVEK) and the rest is

¹ Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

1 supplied by ground water wells.² CWS's project justification states the requested supply
2 study will identify supply alternatives to lessen dependence on purchased water and
3 increase local supply reliability.³

4 The Leona Valley system's MDD was near 600 gpm only in the years 2005 through
5 2007.⁴ **Figure 2-A** shows that the MDD of 600 gpm in 2007 has decreased to below 400
6 gpm (391 gpm in 2013 and 394 gpm in 2014). This constitutes a 34% reduction in MDD
7 since its peak in 2007.

8 **Figure 2-A: Leona Valley's Decreasing MDD Trend⁵**



9

10 With a MDD of 394 gpm, the current groundwater production capacity of 60 gpm (Well
11 1 with 30 gpm and Well 7 with 30 gpm)⁶ would be 15% of the MDD.

² CWS Antelope Valley Project Justifications, p. 200.

³ CWS Antelope Valley Project Justifications, p. 200.

⁴ CWS Response to ORA Data Request BYU-009, Attachment Draft Demand AV.xlsx.

⁵ Chart plotted using the data provided in CWS Response to ORA Data Request BYU-009, Attachment Draft Demand AV.xlsx.

⁶ CWS Antelope Valley Project Justification, p. 200.

1 In 2014, wells in the Leona Valley produced 22.2 million gallons (MG) of water and
2 CWS purchased 65.5 MG⁷ (200 acre feet (AF)) of water (87.7 MG total annual
3 consumption = 270 AF).⁸ This level of total annual consumption (87.7 MG) can be
4 expressed as 167 gpm. However, CWS claims that the 2014 average day demand (ADD)
5 as 236 gpm and the MDD as 394 gpm.⁹ It is noted that the Leona Valley's actual
6 consumption in 2014 was a lot less than the ADD and MDD: 167 gpm of total
7 consumption vs. 236 gpm of ADD and 394 gpm of MDD.

8 According to CWS's work paper, a unit cost of water from AVEK is \$451 per AF.¹⁰
9 Thus, in 2014, CWS purchased 65.5 MG (200 AF) of water in Leona Valley at a total
10 cost of \$90,000.¹¹ Assuming this supply study was authorized, and if the study identifies
11 locations for wells, to make up for the 65 MG of purchased water (124 gpm, or 200 AF),
12 CWS has to construct at least four wells that are similar in size (30 gpm) with the existing
13 wells. According to CWS, the total cost of a typical well construction in Antelope Valley
14 is about \$475,000 excluding the land purchase.¹² The total cost of well construction in
15 the Leona Valley to replace the purchase water would be approximately \$2 million.¹³

⁷ CWS response to ORA Data Request BYU-009, Attachment Q.1.

⁸ The sum of these two represents the total consumption by the Leona Valley system.

⁹ CWS Response to ORA DR A1507015-BYU-009, Draft Demand AV.xlsx.

¹⁰ CWS Antelope Valley work paper, WP4B14.

¹¹ Using 65 MG of purchase water from 2014 as a basis and 65 MG converts to 200 AF. Purchase Water Cost = \$451/AF X 200 AF.

¹² CWS's response to ORA Data Request BYU-011, Question 1.c.

¹³ Each well would cost \$475K + land ~ \$500K.

1 The first year revenue requirement for the \$2 million project is over \$291,492.¹⁴ The
2 revenue requirement for groundwater is more than three times the cost of purchasing
3 water. It does not account for the increased pumping expenses (power, chemical,
4 pumping fees, etc.), property taxes, building a transmission pipeline if the wells were
5 built away from the Leona Valley System, and ongoing maintenance of the wells.¹⁵ If
6 these extra costs were considered, cost of the purchase water becomes even more
7 attractive than constructing new wells.

8 Additionally, CWS states, in the project justification that another need for a new
9 groundwater supply is to prepare for the AVEK feeder failing due to an emergency or an
10 earthquake. CWS included in the project justification a map to show that the Leona
11 Valley is sitting right on top of the San Andreas Fault. If the San Andreas Fault causes
12 an earthquake that is strong enough to incapacitate the AVEK feeder, there is no
13 guarantee that CWS's own infrastructures would not be susceptible to earthquake
14 damages and still be able to distribute water supply. Therefore, groundwater supply
15 cannot be an alternative to the AVEK feeder during big seismic movement, especially in
16 Leona Valley. When CWS requests a new source of groundwater supply due the AVEK
17 feeder's reliability during emergency, CWS is in turn proposing complete independence
18 from the purchased water for meeting the system demand. In this case, CWS has to
19 consider meeting the system MDD by groundwater supply only. As it was noted above,
20 the system MDD in 2014 was 394 gpm and could be expected to continue to decline
21 under aggressive conservation programs, and requirements to meet drought mandates. In

¹⁴ [$\$2 \text{ million} \times \text{Rate of Return (7.94\%)} \times \text{Net to Gross Multiplier (1.34944)}$] + [$\$2 \text{ million} \times \text{Depreciation Rate (3.86\%)}$] = \$291,492.

¹⁵ Both CWS Project Justification (p. 200) and CWS response to ORA Data Request BYU-001 (Question 1.a.) indicates a possibility of identifying (by the study) a potential well site outside of the Leona Valley system.

1 order for the Leona Valley to meet the system MDD of 394, CWS has to construct 12
2 new wells with similar capacity of the existing wells.¹⁶

3 In CWS's work paper (Table4SupplyLEO), CWS estimates the followings amounts for
4 the AVEK water purchase:

5 **Table 2-D: CWS's Projected Purchased Water Amount**

	2015	2016	2017	2018
PURCHASES - AVEK (in kccf)	15.7	15.7	15.7	15.7
in AF	36	36	36	36

7 Since CWS is projecting the volume of AVEK purchase for this GRC to be 36 AF
8 annually, the only savings that would occur by not purchasing the water (utilizing
9 groundwater only) would be \$16,236 per year.

10 Below is ORA's presentation of CWS's savings for not purchasing water versus revenue
11 requirement from 12 additional wells.

12 **Table 2-E: New Wells Revenue Requirement vs. Cost Savings**

	New wells needed	Revenue Requirement*	Purchase Water Cost for the Demands** (CWS would pay to meet ADD and MDD)	Purchase Water Cost saving (@200AFY)***	Purchase Water Cost Saving (@36 AFY)****
To meet ADD of 236 gpm	6	\$ 473,102	\$ 128,121	\$ 90,200	\$ 16,236
To meet MDD of 394 gpm	12	\$ 946,203	\$ 243,138		
* Revenue requirement is based on [well construction (\$500K each) X Rate of return (7.94%) X Net to gross multiplier (1.34944)]+[Depreciation Expense (\$500K X Dep. Rate of 3.86%)]+[Property tax (\$500K X Ad Valorem tax rate of 1.1955%)]					
** Demand minus 60 gpm of existing well capacity and assuming the rest would be supplied by Purchased Water to meet demands					
*** 200 AFY is based on 65 MG purchased water amount found in CWS response to ORA Data Request BYU-009					
**** 36 AFY is based on CWS estimated purchased water amount found in Antelope Valley work paper Table4SupplyLEO					

¹⁶ MDD of 394 gpm minus Existing Well capacity of 60 gpm = 334 gpm. 334 gpm/30 gpm = 11.1 wells. So, at least 12 wells are needed to meet the MDD.

As presented above, constructing wells in the Leona Valley is not cost beneficial to the AVEK purchase water.

In summary, drilling new wells in the Leona Valley system (that would collectively cost over at least \$2 million) for supply reliability would be too much of a cost burden on CWS's 420 customers in Leona Valley system. Also, groundwater is not an economically feasible alternative measure to prepare for failure of the AVEK feeder due to seismic activities. Therefore, ORA recommends the Commission disallow CWS's request for the groundwater Supply Study request.

b. Vehicle Replacements (PIDs 99100 & 99108)

CWS requests to replace a total of four vehicles in this GRC. For reasons presented in ORA's Report on Plant – Common Issues, ORA recommends the following vehicles shown in **Table 2-F** below:

Table 2-F: Vehicle Replacement Recommendations

Proposed Year	District	Project ID	Vehicle ID	CWS Request	ORA Recommendation	ORA Explanation
2016	Antelope Valley	99100	V209053	\$ 71,022	\$ 71,022	postpone to 2017
2016	Antelope Valley	99100	V211018	\$ 41,521	\$ 41,521	allowed
2018	Antelope Valley	99108	V213037	\$ 74,618	\$ -	postpone to 2019
2018	Antelope Valley	99108	V213038	\$ 74,618	\$ -	next GRC
Total:				\$ 261,778	\$ 112,543	

c. Pipeline Replacement Program (PIDs 129MRP16, 129MRP17 & 129MRP18)

CWS requests \$184,196 in 2016, \$188,801 in 2017 and \$193,521 in 2018 for pipeline replacement in Antelope Valley District. CWS is proposing to replace 792 feet per year. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 2-G** below shows ORA's recommendations for pipeline replacement and the associated budgets in this district.

Table 2-G: Pipeline Replacement Request – Antelope Valley District

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099905	206	\$ 35,841	792	\$ 184,196
2017	00099906	206	\$ 36,686	792	\$ 188,801
2018	00099907	206	\$ 37,523	792	\$ 193,521

d. Meter Replacement Program (PID AVD900)

CWS requests a specific budget for replacing its small and large meters in accordance to the Commission's GO 103A requirements in the Antelope Valley District. **Table 2-H** below compares CWS's requests and ORA's recommendation. ORA's recommended budgets are based on detailed analysis and recommendation in its Report on Plant – Common Issues.

Table 2-H: Meter Replacement Recommendations

District:		Antelope Valley			
YEAR	PID	ORA's Recommendation		CWS's Proposal	
2016	0900	\$	885	\$	10,302
2017	0900	\$	906	\$	10,560
2018	0900	\$	927	\$	10,824

2. Non-Specific Budgets for 2016-2018

CWS requests \$331,000 in the Non-Specific Budget to address unforeseen, unplanned, and emergency projects and regulatory compliant projects. ORA's Report on Plant - Common Issues presents ORA's recommended total disallowance of this budget.

3. 2015 Capital Budget

CWS requests approximately \$600,000 for plant additions in 2015, which consist of projects authorized for year 2015 and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents its analysis and recommended 2015 capital additions for Antelope Valley.

1 **D. CONCLUSION**

2 ORA's recommendations presented above have been incorporated in the calculations for
3 estimated Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix
4 RO.

Chapter 3: Plant – Dominguez District

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Dominguez District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 3-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Pipeline Replacement Program, AMI/AMR Request, Meter Replacement Program, SCADA Upgrade, Non Specific Budgets and 2015 Capital Budget. **Table 3-B** presents ORA project-specific adjustments.

Table 3-A: Capital Budget Summary – Dominguez District

Dominguez (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 4,553.0	\$ 4,025.7	\$ 2,160.4	\$ 1,995.2	\$ 3,183.6
CWS	\$ 15,924.3	\$ 14,292.9	\$ 7,998.6	\$ 34,483.6	\$ 18,174.9
CWS > ORA	\$ 11,371.3	\$ 10,267.2	\$ 5,838.2	\$ 32,488.4	\$ 14,991.3
ORA as % of CWS	29%	28%	27%	6%	22%

Table 3-B: Capital Budget Details – Dominguez District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	79661	Advance Metering pilot	\$ -	\$ 1,150,000	\$ 1,150,000	0%
	61214	3 Sample Sites - Various Locations	\$ -	\$ 98,580	\$ 98,580	0%
	61272	Retrofit Booster Station - St. Sepulveda and Ellinwood - Torrance	\$ -	\$ 78,864	\$ 78,864	0%
	61293	Pump and Motor - 190th Street & Beryl and E. Del Amo Cir. &	\$ -	\$ 199,704	\$ 199,704	0%
	61773	Paint Interior under roof & Exterior Complete; 4 New Cupola Vents; Replace Interior Safety Climb - Sta. 203 Tank 1	\$ -	\$ 33,733	\$ 33,733	0%
	62418	Upgrade RTU - WB-39	\$ -	\$ 29,129	\$ 29,129	0%
	63111	Upgrade RTU - Interconnection IT-1 (Sepulveda and Del Amo)	\$ -	\$ 29,129	\$ 29,129	0%
	63113	Upgrade RTU - Interconnection IT-2 (Sepulveda and Ocean)	\$ -	\$ 29,129	\$ 29,129	0%
	63133	Upgrade RTU - Interconnection IT-3 (Prospect and Torrance)	\$ -	\$ 29,129	\$ 29,129	0%
	63152	Upgrade RTU - Interconnection IT-4 (Prospect and Del Amo)	\$ -	\$ 29,129	\$ 29,129	0%
	63155	Upgrade RTU - WB-21	\$ -	\$ 29,129	\$ 29,129	0%
	63656	Replace Hydrants with Valves - Various Locations	\$ -	\$ 68,688	\$ 68,688	0%
	63822	Replace 10 Blowoffs - Various Locations	\$ -	\$ 54,950	\$ 54,950	0%
	64631	Replace Valve Casing - Various Locations	\$ -	\$ 38,160	\$ 38,160	0%
	64714	Bypasses and Valves - Various Locations	\$ -	\$ 90,000	\$ 90,000	0%
	64752	Field - Meter Reading Equipment	\$ -	\$ 25,500	\$ 25,500	0%
	79667	Install 683'-6" PVC Main, 1-6" Fire hydrant and 29-1" Services. Retire 683'-4" AC Main and 29-3/4" Services. On Orchard Ave from 235th Street North to end of Street.	\$ 149,957	\$ 212,178	\$ 62,221	71%
	79667	Install 683'-6" PVC Main, 1-6" Fire hydrant and 29-1" Services. Retire 683'-4" AC Main and 29-3/4" Services. On Orchard Ave from 235th Street North to end of Street.	\$ 67,035	\$ 41,760	\$ (25,275)	161%
	79667	Install 683'-6" PVC Main, 1-6" Fire hydrant and 29-1" Services. Retire 683'-4" AC Main and 29-3/4" Services. On Orchard Ave from 235th Street North to end of Street.	\$ 17,137	\$ 4,200	\$ (12,937)	408%
	79670	Install 2539'-6" PVC Main, 3-6" Fire Hydrant and 75-1" Services. Retire 2539'-4" AC Main, 2-4" Fire Hydrant, 3-1" Services and 72-3/4" Services. On the East side of Anza Ave from Halison St. South to existing 12" AC	\$ -	\$ 768,940	\$ 768,940	0%
	79670	Install 2539'-6" PVC Main, 3-6" Fire Hydrant and 75-1" Services. Retire 2539'-4" AC Main, 2-4" Fire Hydrant, 3-1" Services and 72-3/4" Services. On the East side of Anza Ave from Halison St. South to existing 12" AC	\$ -	\$ 10,800	\$ 10,800	0%
	79670	Install 2539'-6" PVC Main, 3-6" Fire Hydrant and 75-1" Services. Retire 2539'-4" AC Main, 2-4" Fire Hydrant, 3-1" Services and 72-3/4" Services. On the East side of Anza Ave from Halison St. South to existing 12" AC	\$ -	\$ 12,600	\$ 12,600	0%
	79672	Install 6450'-6" PVC Main, 7-6" Fire Hydrants and 231-1" Services. Retire 6450'-4" AC Main, 2-4" Fire Hydrants and 231-3/4" Services. On E 185 Th St. from Towne Ave to Billings Ave, On E 185 TH St. From Billings Ave West to end of Street, On E 186 TH St	\$ 1,281,418	\$ 1,985,878	\$ 704,460	65%
	79672	Install 6450'-6" PVC Main, 7-6" Fire Hydrants and 231-1" Services. Retire 6450'-4" AC Main, 2-4" Fire Hydrants and 231-3/4" Services. On E 185 Th St. from Towne Ave to Billings Ave, On E 185 TH St. From Billings Ave West to end of Street, On E 186 TH St	\$ 447,302	\$ 332,640	\$ (114,662)	134%
	79672	Install 6450'-6" PVC Main, 7-6" Fire Hydrants and 231-1" Services. Retire 6450'-4" AC Main, 2-4" Fire Hydrants and 231-3/4" Services. On E 185 Th St. from Towne Ave to Billings Ave, On E 185 TH St. From Billings Ave West to end of Street, On E 186 TH St	\$ 156,580	\$ 29,400	\$ (127,180)	533%
Specifics Total			\$ 2,119,428	\$ 5,411,347	\$ 3,291,919	39%
Non-Specifics Total			\$ 913,054	\$ 1,060,100	\$ 147,046	86%
Carry-Overs Total			\$ 1,520,519	\$ 9,452,879	\$ 7,932,360	16%
TOTAL 2015			\$ 4,553,002	\$ 15,924,326	\$ 11,371,324	29%

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	96517	Install lighting at station 203 for security and safety	\$ 52,925	\$ 52,925	\$ -	100%
	98566	Install Lights at Station 279	\$ 38,016	\$ 38,016	\$ -	100%
	98580	Install Lights at Dominguez Carson Yard	\$ 38,016	\$ 38,016	\$ -	100%
	98582	Install Lights at Station 203	\$ 38,016	\$ 38,016	\$ -	100%
	97939	Install 3 - 24" cupola vents.	\$ 25,332	\$ 25,332	\$ -	100%
	98565	Install Tank Circulation at Station 279	\$ 75,287	\$ 75,287	\$ -	100%
	98577	Install Tank Circulation at Station 277	\$ 75,287	\$ 75,287	\$ -	100%
	98578	Install Tank Circulation at Station 215	\$ 75,287	\$ 75,287	\$ -	100%
	98579	Install Tank Circulation at Station 298	\$ 75,287	\$ 75,287	\$ -	100%
	98564	Install Free Chlorine Analyzer at Station 279	\$ 30,562	\$ 30,562	\$ -	100%
	98573	Install Free Chlorine Analyzer at Station 215	\$ 30,562	\$ 30,562	\$ -	100%
	98575	Install Free Chlorine Analyzer at Station 297	\$ 30,562	\$ 30,562	\$ -	100%
	98576	Install Free Chlorine Analyzer at Station 298	\$ 30,562	\$ 30,562	\$ -	100%
	98958	Replace Ammonia Tanks at Station 277, 297, 279, 298 and 215	\$ 76,033	\$ 76,033	\$ -	100%
	98427	Replace Blowoffs - Various Locations	\$ 70,883	\$ 70,883	\$ -	100%
	98630	Overhaul of Control Valves in the Rancho Dominguez District - 2016	\$ 21,655	\$ 59,634	\$ 37,979	36%
	128MRP16	The 2016 main replacement program will replace 10,779 feet of pipelines in the Dominguez district at an estimated cost of \$143 per foot.	\$ 1,268,015	\$ 2,297,971	\$ 1,029,956	55%
	98401	Install By-Pass and Valves for meters 3" and larger	\$ 76,846	\$ 76,846	\$ -	100%
	93533	Advanced Metering Infrastructure Pilot. Install fixed network meter reading infrastructure and meters.	\$ -	\$ 519,534	\$ 519,534	0%
	98057	Hydrant Meter Reduced Pressure Principal Assembly	\$ 28,396	\$ 28,396	\$ -	100%
	99162	Installation of 3,518 AMR equipped meters. Continuation of approved 2012 GRC AMR Pilot to replace direct read meters due for replacement under age criteria in GO 103 with AMR equipped meters.	\$ -	\$ 1,490,598	\$ 1,490,598	0%
	DOM0900	Meter Replacement Program	\$ 130,348	\$ 68,872	\$ (61,476)	189%
	98396	Replace Fire hydrants and install Valves in the Dominguez District	\$ 79,504	\$ 502,219	\$ 422,715	16%
	98361	Replace Air Tools	\$ 36,418	\$ 36,418	\$ -	100%
	98362	Current hand tools will need to be replaced due to wear, tear, and age.	\$ 11,904	\$ 11,904	\$ -	100%
Specifics Total			\$ 2,415,705	\$ 5,855,011	\$ 3,439,306	41%
Non-Specifics Total			\$ -	\$ 1,360,900	\$ 1,360,900	0%
Carry-Overs Total			\$ 1,610,000	\$ 7,077,000	\$ 5,467,000	23%
TOTAL 2016			\$ 4,025,705	\$ 14,292,911	\$ 10,267,206	28%

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	100482	This project will purchase property in the DOM district to construct a new well. The property will be located within the general area recommended in the supply optimization study completed in 2015 under WO 63837. The lot size shall be at least 15,000 sq ft to accommodate a well, treatment facilities & a slump stone block building. A separate & future project, FP 98334 , will fund the construction of the well &	\$ -	\$ 1,248,379	\$ 1,248,379	0%
	98567	Install Fence and and Gate at Station 232	\$ 61,888	\$ 61,888	\$ -	100%
	98581	Install Fence and and Gates at Station 275	\$ 61,888	\$ 61,888	\$ -	100%
	98583	Install Fence and and Gates at Carson Dominguez Yard.	\$ 61,888	\$ 61,888	\$ -	100%
	98584	Install Fence and and Gate at Station 272	\$ 61,888	\$ 61,888	\$ -	100%
	98585	Install Fence and and Gate at Station 297	\$ 61,888	\$ 61,888	\$ -	100%
	98574	Install Tank A, B, C, D Tank Overflow Dechlorination Tube Installation	\$ 31,326	\$ 31,326	\$ -	100%
	98590	Install Tank A, B, Tank Overflow Dechlorination Tube Installation at	\$ 16,045	\$ 16,045	\$ -	100%
	98591	Install Tank Overflow Dechlorination Tube Installation at Station 232	\$ 8,405	\$ 8,405	\$ -	100%
	98592	Install Tank Overflow Dechlorination Tube Installation at Station 298	\$ 8,405	\$ 8,405	\$ -	100%
	98593	Install Tank Overflow Dechlorination Tube Installation at Station 297	\$ 8,405	\$ 8,405	\$ -	100%
	98595	Install Tank Overflow Dechlorination Tube Installation at Station 277	\$ 8,405	\$ 8,405	\$ -	100%
	98097	Replacement of pump and motor at Sta. 279-01. Replace pump to improve efficiency.	\$ 106,684	\$ 106,684	\$ -	100%
	98568	Install Chloine Tank and Chlorine Pump at Station 203	\$ 12,683	\$ 12,683	\$ -	100%
	98586	Install Chloine Tank and Chlorine Pump at Station 277	\$ 12,683	\$ 12,683	\$ -	100%
	98587	Install Chloine Tank and Chlorine Pump at Station 298	\$ 12,683	\$ 12,683	\$ -	100%
	98588	Install Chloine Tank and Chlorine Pump at Station 215	\$ 13,420	\$ 13,420	\$ -	100%
	98632	Overhaul of Control Valves in the Rancho Dominguez District - 2017	\$ 22,166	\$ 61,124	\$ 38,958	36%
	128MRP17	The 2017 main replacement program will replace 10,779 feet of pipelines in the Dominguez district at an estimated cost of \$143 per foot.	\$ 1,297,941	\$ 2,355,421	\$ 1,057,480	55%
	98405	Install By-Pass and Valves for meters 3" and larger	\$ 78,767	\$ 78,767	\$ -	100%
	99173	Installation of 3,518 AMR equipped meters. Continuation of approved 2012 GRC AMR Pilot to replace direct read meters due for replacement under age criteria in GO 103 with AMR equipped meters.	\$ -	\$ 1,527,863	\$ 1,527,863	0%
	DOM0900	Meter Replacement Program	\$ 133,424	\$ 70,593	\$ (62,831)	189%
	98397	Replace Fire hydrants and install Valves in the Dominguez District	\$ 79,504	\$ 514,774	\$ 435,270	15%
Specifics Total			\$ 2,160,386	\$ 6,405,506	\$ 4,245,119	34%
Non-Specifics Total			\$ -	\$ 1,393,100	\$ 1,393,100	0%
Carry-Overs Total			\$ -	\$ 200,000	\$ 200,000	0%
TOTAL 2017			\$ 2,160,386	\$ 7,998,606	\$ 5,838,219	27%

1

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98333	Drill, Develop, Equip and Treatment at New Well - West Basin	\$ -	\$ 561,991	\$ 561,991	0%
	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin 03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	\$ -	\$ 739,750	\$ 739,750	0%
	98415	Project will provide design/permitting for the complete rebuild of existing pump station 203 to include: replacement of pumps, piping, electrical and control facilities and includes the construction of a block building to house	\$ -	\$ 77,559	\$ 77,559	0%
	98563	Replace Asphalt at Station 298	\$ 39,941	\$ 39,941	\$ -	100%
	99341	DOM 297-01 has levels of color over the SMCL, high levels of TOC for a groundwater well, and naturally occurring ammonia. These constituents lead to unstable water quality in the distribution system, causing low chlorine residuals, chlorine loss, & nitrification.	\$ -	\$ 432,938	\$ 432,938	0%
	99522	DOM 272-01 has levels of methane and color over the SMCL, high levels of TOC for a groundwater well, and naturally occurring ammonia. These constituents lead to unstable water quality in the distribution system, causing low chlorine residuals, chlorine loss, & nitrification.	\$ -	\$ 411,324	\$ 411,324	0%
	101018	DOM 219-02 will require treatment	\$ -	\$ 434,745	\$ 434,745	0%
	98333	Drill, Develop, Equip and Treatment at New Well - West Basin	\$ -	\$ 1,596,306	\$ 1,596,306	0%
	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin 03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	\$ -	\$ 1,735,477	\$ 1,735,477	0%
	98099	Replacement of pump and motor.	\$ 88,342	\$ 88,342	\$ -	100%
	98333	Drill, Develop, Equip and Treatment at New Well - West Basin	\$ -	\$ 489,945	\$ 489,945	0%
	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin 03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	\$ -	\$ 876,780	\$ 876,780	0%
	98415	Project will provide design/permitting for the complete rebuild of existing pump station 203 to include: replacement of pumps, piping, electrical and control facilities and includes the construction of a block building to house	\$ -	\$ 541,075	\$ 541,075	0%
	99167	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 650,406	\$ 650,406	0%
	99415	Replace Discharge Pipe at Station 297	\$ 41,507	\$ 41,507	\$ -	100%
	101018	DOM 219-02 will require treatment	\$ -	\$ 303,647	\$ 303,647	0%
	98333	Drill, Develop, Equip and Treatment at New Well - West Basin	\$ -	\$ 4,635,797	\$ 4,635,797	0%
	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin 03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	\$ -	\$ 397,011	\$ 397,011	0%
	99341	DOM 297-01 has levels of color over the SMCL, high levels of TOC for a groundwater well, and naturally occurring ammonia. These constituents lead to unstable water quality in the distribution system, causing low chlorine residuals, chlorine loss, & nitrification.	\$ -	\$ 4,477,591	\$ 4,477,591	0%
	99522	DOM 272-01 has levels of methane and color over the SMCL, high levels of TOC for a groundwater well, and naturally occurring ammonia. These constituents lead to unstable water quality in the distribution system, causing low chlorine residuals, chlorine loss, & nitrification.	\$ -	\$ 5,117,993	\$ 5,117,993	0%
	101018	DOM 219-02 will require treatment	\$ -	\$ 4,506,301	\$ 4,506,301	0%
	98430	Replace Blowoffs - Various Locations	\$ 75,895	\$ 75,895	\$ -	100%
	98633	Overhaul of Control Valves in the Rancho Dominguez District - 2018	\$ 22,672	\$ 62,652	\$ 39,980	36%
	128MRP18	The 2018 main replacement program will replace 10,779 feet of pipelines in the Dominguez district at an estimated cost of \$143 per foot.	\$ 1,327,534	\$ 2,414,306	\$ 1,086,772	55%
	99288	Install By-Pass and Valves for meters 3" and larger	\$ 162,781	\$ 162,781	\$ -	100%
	99183	Installation of 3,518 AMR equipped meters. Continuation of approved 2012 GRC AMR Pilot to replace direct read meters due for replacement under age criteria in GO 103 with AMR equipped meters.	\$ -	\$ 1,566,060	\$ 1,566,060	0%
	DOM0900	Meter Replacement Program	\$ 136,466	\$ 72,358	\$ (64,108)	189%
	98399	Replace Fire hydrants and install Valves in the Dominguez District	\$ 79,504	\$ 527,644	\$ 448,140	15%
	98561	Replace Air Compressor in the Dominguez District	\$ 20,583	\$ 20,583	\$ -	100%
Specifics Total			\$ 1,995,226	\$ 33,058,705	\$ 31,063,480	6%
Non-Specifics Total			\$ -	\$ 1,424,900	\$ 1,424,900	0%
Carry-Overs Total			\$ -	\$ -	\$ -	
TOTAL 2018			\$ 1,995,226	\$ 34,483,605	\$ 32,488,380	6%

C. DISCUSSION

The Dominguez District recorded \$4,890,900 per year in average company-funded plant additions for the most recent six-year period 2009-2014.¹⁷ **Table 3-C** compares CWS's and ORA's estimates for years 2015 to 2018 against recorded annual average company-funded plant additions.

Table 3-C: Capital Budget Summary vs. Recorded Expenditures– Dominguez District

Dominguez (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 4,890.9	100%
ORA	\$ 4,553.0	\$ 4,025.7	\$ 2,160.4	\$ 1,995.2	\$ 3,183.6	65%
CWS	\$ 15,924.3	\$ 14,292.9	\$ 7,998.6	\$ 34,483.6	\$ 18,174.9	372%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 non-specific projects (Section 2), and 2015 capital budget (Section 3) below.

1. **Specific Projects**

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Pipeline Replacement Program (PIDs 99209, 99210, & 99211)

CWS requests \$2,233,743 in 2016, \$2,289,587 in 2017 and \$2,346,826 in 2018 for pipeline replacement in the Dominguez District. CWS is proposing to replace 10,779 feet per year. Based on ORA's analysis of CWS's Main Replacement Program discussed

¹⁷ Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

in the Common Section of ORA’s report, ORA made adjustments to the annual replacement length and the unit cost of replacement. ORA’s recommendation is summarized in **Table 3-D** below:

Table 3-D: Pipeline Replacement Budget – Dominguez District

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099209	4,855	\$ 1,268,015	10,779	\$ 2,297,971
2017	00099210	4,855	\$ 1,297,941	10,779	\$ 2,355,421
2018	00099211	4,855	\$ 1,327,534	10,779	\$ 2,414,306

b. Advanced Metering Infrastructure (AMI) (PIDs 99162, 99173 & 99183)

See ORA’s AMR/AMI Testimony in its Report on Plant – Common Issues.

c. Meter Replacement Program (PID DOM900)

CWS requests \$68,872 in 2016, \$70,593 in 2017 and \$72,358 in 2018 to replace the Dominguez district’s large meters in accordance with the Commission GO 103A requirements. Usually, both small and large meters are replaced under the Meter Replacement Program, but, in this GRC, CWS requested the above AMR Meter Installation project to replace the district’s small meters that are due for replacement in accordance with GO 103A requirements. Because ORA is recommending disallowance of the AMR installation project, PID DOM900 should be adjusted to included small meter replacements. This adjustment makes ORA’s recommended budget higher than CWS’s requested budget. ORA recommends the Commission adopt the following budget for PID DOM900.

Table 3-E: ORA’s Recommended Meter Replacement Budget

District:		Dominguez		
YEAR	PID	ORA's Recommendation	CWS's Proposal	
2016	0900	\$ 130,348	\$ 68,872	
2017	0900	\$ 133,424	\$ 70,593	
2018	0900	\$ 136,466	\$ 72,358	

1 ORA's recommended budget is in line with CWS's historical meter replacement budget
2 (six-year average from 2009 to 2014) as it was discussed more in detail ORA's Report on
3 Common Plant.

4 *d. Replace Fire Hydrants and Valves (PIDs 98396, 98397 & 98399)*

5 CWS requests \$502,219 in 2016, \$514,774 in 2017, and \$527,644 in 2018 to replace
6 hydrants that currently do not have isolation valves throughout the Dominguez District.
7 According to the project justification, CWS's need to upgrade the hydrants to have
8 isolation valves is to meet "Cal Water standard."¹⁸ On the same page of the project
9 justification, CWS states that an isolation valve added to a hydrant would make it
10 possible for CWS to continue providing water to customers during hydrant maintenance.
11 Also, CWS states if a hydrant is knocked off due to an accident, it would be easier for
12 CWS to isolate the hydrant without interrupting service to the customers.

13 According to CWS's response to ORA Data Request BYU-015, Question 1.b, it would
14 take at least 13 years to upgrade all of the existing 386 hydrants that currently do not
15 have isolation valves. CWS did not state anywhere, in neither its project justification nor
16 its response to ORA's data requests, that this is a mandate from a regulatory requirement
17 or government authority. Rather, as discussed earlier, it is required only by "CWS's own
18 standards." Instead of counting how many years it would take to replace all, a review of
19 historical installation would be more appropriate since CWS stated this project is a
20 Routine Replacement.¹⁹

21 According to CWS's response to ORA Data Request Byu-015, Question 1.c, CWS
22 reported that it upgraded the following number of hydrants in the past five years:

¹⁸ Dominguez Project Justification, p. DOM PJ-220.

¹⁹ Ibid.

Year	PID #	No. of Fire Hydrants
2010	00019862	4
2011	00019863	4
2012	00019868	8
2013	00063615	3
2014	00063637	8
2014	00097080	23

To verify these projects, ORA reviewed CWS's Recorded Budget data from 2010 to 2015 and found the following:²⁰

Table 3-F: CWS's Recorded Cost for Hydrant Upgrade

District	Year	PID	Description	Cost
DOMINGUEZ	2010	40027	REPL. HYDRANT & GATE VAL	\$ 3,569.75
DOMINGUEZ	2010	40027	REPL. HYDRANT & GATE VAL	\$ 8,017.10
DOMINGUEZ	2011	40027	REPL. HYDRANT & GATE VAL	\$ (26.17)
DOMINGUEZ	2011	40027	REPL. HYDRANT & GATE VAL	\$ (58.77)
DOMINGUEZ	2012	19862	Replace Hydrants with Valves	\$ 51,326.69
DOMINGUEZ	2012	19862	Replace Hydrants with Valves	\$ (2,157.75)
DOMINGUEZ	2012	19863	REPL. HYD'S WITH VALVES	\$ 100,274.45
DOMINGUEZ	2013	19868	REPL. HYD,S WITH VALVES	\$ 117,799.01
DOMINGUEZ	2013	40667	REPL 4" HYDRANT VALVE	\$ 7,053.01
DOMINGUEZ	2014	63615	Repl. Hydrants W/Valves Various Loc	\$ 67,749.72
DOMINGUEZ	2015	63637	Repl. Hydrants W/Valves Various Lo	\$ 123,475.97
			Total	\$ 477,023
			Historical Annual Avg. (Total/6 years)	\$ 79,504

ORA could not find the recorded amount for the PID 97080 from the Dominguez District Recorded Plants data provided by CWS. Since the hydrant upgrade is not required by a government mandate but CWS's own requirement, ORA believes it is more reasonable to

²⁰ CWS's Reports on the Results of Operations (2009-2014) and CWS's response to ORA Data Request JA-009 (2015).

1 use the six-year historical average in place of CWS's requested budget. Therefore, ORA
2 recommends the Commission adopt a budget of \$79,504 per year.

3 *e. Replace SCADA Software and Hardware (PID 99167)*

4 CWS requests \$650,406 in 2017 to replace the district's SCADA server hardware and
5 programming. This request is the Dominguez District's portion of the Company-wide
6 SCADA upgrade project requested at its General Office. ORA's disallowance
7 recommendation on the SCADA system upgrade is discussed in the ORA's Report on
8 Plant – Common Issues.

9 *f. Station 203 Rebuild Design (Phase I) (PID 98415)*

10 CWS requests \$618,633 in 2018 to design the rebuilding of Station 203. According to
11 CWS's project justification, the total construction cost of Station 203 Rebuild project
12 ranges from \$1,899,895 to \$2,170,000.²¹

13 According to CWS's project justification, Station 203 is located in pressure Zone 3 of the
14 Dominguez District and has four 3.5 MG tanks and seven booster pumps. The station
15 also has a hydro-pneumatic tank, a chemical storage building, and an emergency diesel
16 generator. The booster pumps at the Station 203 are the primary source of supply to the
17 boosted pressure Zone 3 that has no gravity storage. Storage tanks at Station 203 feed
18 Zone 2 by gravity. According to the preliminary project scope identified in the project
19 justification, CWS proposes to replace the existing seven pumps with four vertical
20 turbine pumps with variable frequency drives in a masonry block building in the next
21 GRC (2019). New electrical panels and other site modifications and site improvements

²¹ CWS Dominguez Project Justification, pp. DOM PJ-238 to 240.

1 will also be requested in the 2019 GRC. However, CWS is requesting a budget for the
2 project design in this GRC.

3 CWS lists several reasons for the need of this project in its project justification:

4 *i. CWS's claim: A full pump station replacement is proposed PRIMARILY due*
5 *to the current physical location [emphasis added]*

6 CWS states in its project justification that the below ground, open vault configuration of
7 the pump station makes it more expensive and complex to repair or replace each of the
8 pumps.²² ORA asked CWS to provide the additional cost incurred due to the complexity
9 of replacing the pumps in the existing vault. According to CWS's response to ORA Data
10 Request BYU-005,Q.1.a., CWS failed to provide "additional costs" in a tangible manner
11 other than stating that the pump installation labor would be more expensive when done
12 within a vault compared to above ground, open space and easy access installation.

13 CWS's response to ORA's data request contradicts CWS's project justification. As
14 mentioned earlier, page DOM PJ – 231 of the project justification states that CWS is
15 proposing to replace the existing pumps with "four equally sized vertical pumps ... in
16 masonry block building..." The existing pump station at the Station 203 is an open vault:
17 sub-surface open vault with no walls and with a corrugated sheet metal roof. The
18 existing configuration of the pump station is more accessible than the configuration of the
19 proposed pump station: a masonry block building. Additionally, many of CWS's pumps
20 are housed in a structure, so for those configuration, it would also incur "additional cost"
21 compared to installations in open space.²³ Nevertheless, CWS failed to quantify its

²² CWS Dominguez District Project Justification, p. DOM PJ-232.

²³ Additional cost may incur due to removal of a building roof, bringing in cranes to lift and lower pumps, working inside a confined space of a building, etc.

claims of incurring higher costs. CWS's assertion on additional maintenance cost for the current pump vault configuration has no basis.

ii. CWS's claim: The existing pumps have low efficiency ratings

CWS's project justification states that the pumps have low efficiency ratings ranging from mid-forty to mid-sixty percent. If pumps are rated low in efficiency and malfunctions frequently, it can be repaired or replaced. CWS provided the below table in its response to ORA Data Request BYU-005 which shows the pump rankings for Station 203:

Figure 3-A: Station 203 Pump Rankings

Pump Ranking For Dominguez Station 203										
Station	Asset	Age (Years)	Tested Efficiency (%)	Test Date	Run Hours	Run Hours Rating	Efficiency Score	RUL Score	Criticality Rating	Total Score
Weight						5	10	3	10	
DOM 203-A	Booster	10.0	44.5	01/12/11	4.400	3	4	4	5	117
DOM 203-B	Booster	15.0	67.6	01/12/11	4.400	3	1	2	5	81
DOM 203-C	Booster	15.0	59.0	01/12/11	4.400	3	2	2	5	91
DOM 203-D	Booster	15.0	65.8	01/12/11	4.400	3	1	2	5	81
DOM 203-E	Booster	15.0	67.6	12/04/12	4.400	3	1	2	5	81
DOM 203-F	Booster	15.0	68.4	12/04/12	4.400	3	1	2	5	81
DOM 203-G	Booster	15.0	59.5	12/04/12	4.400	3	2	2	5	91

The data request response explains the pumps with total score between 105 and 140 are selected for replacements. In this case, the only pump that requires replacement at this time is Booster Pump A with a score of 117. Again, individual pumps can always be repaired or replaced if necessary. A rebuild of the entire pumping station is not required.

Additionally, CWS's project justification requests variable frequency drive (VFD) to improve pressure control in the zone that the Station 203 serves. According to the same project justification, it proposes even if the Station Rebuild would proceed, CWS will

1 reuse the existing hydro-pneumatic tank.²⁴ The purpose of hydro-pneumatic tank is to
2 “control the pressure” in the zone. The existence of a hydro-pneumatic tank nullifies the
3 need for VFD to control pressure.

4 *iii. CWS’s claim: The existing pumps are in bad shape*

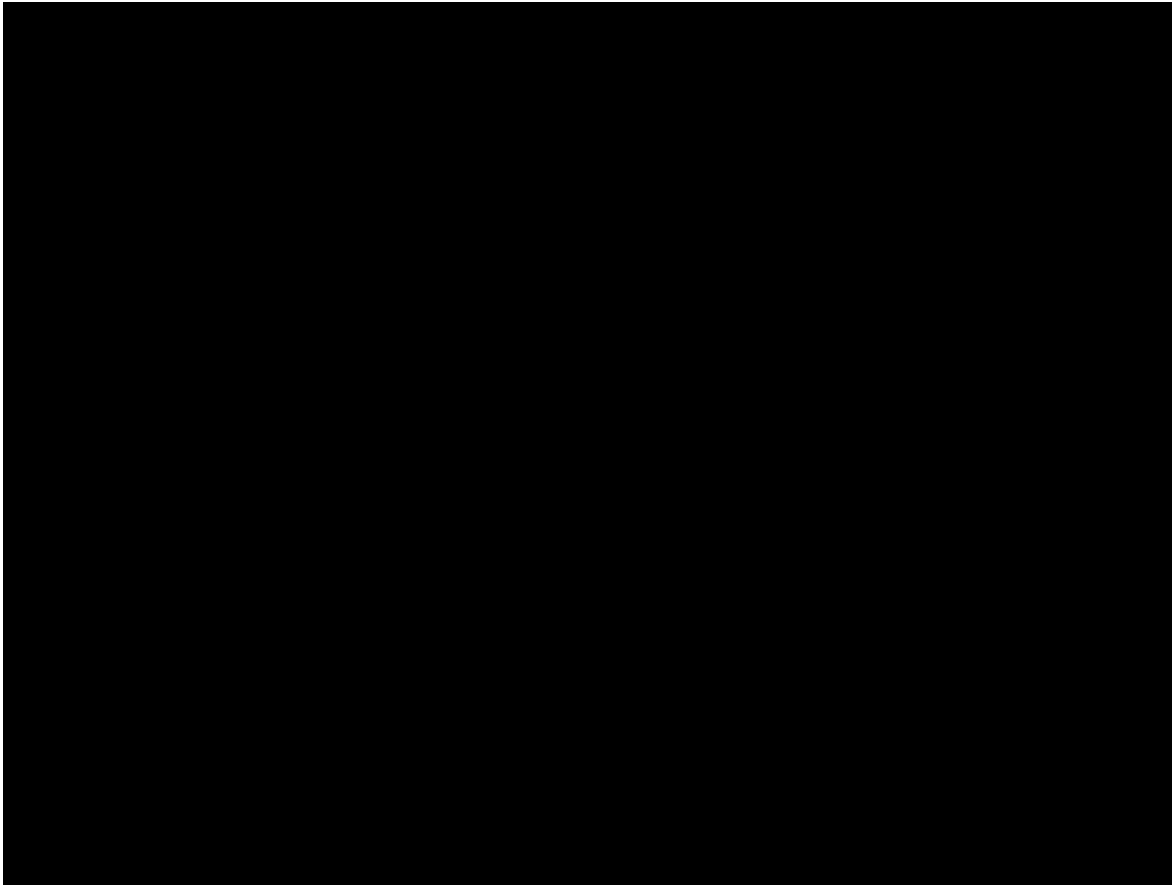
5 ORA’s observation on the picture provided in the project justification and ORA’s visual
6 inspection during its site visit found that the pumps in the vaults did not show
7 extraordinary signs of deterioration. The pumps’ physical appearance is typical of
8 operating pumps, which can be found in any water utility facilities. Again, if the pumps’
9 internal parts are problematic and warrant repairs or replacements, CWS can do so
10 without rebuilding the entire station. As it was mentioned earlier, the “open vault”
11 configuration of the existing pump station has better accessibility than a block wall
12 enclosed pump station that CWS proposes to construct. Below is a picture of the existing
13 pump station included in CWS’s project justification:

²⁴ CWS Dominguez Project Justifications, p. DOM PJ-234.

1 **Figure 3-B: Station 203 Boosters – Photo from the Dominguez Project Justification**

2

*** BEGIN CONFIDENTIAL ***



4

*** END CONFIDENTIAL ***

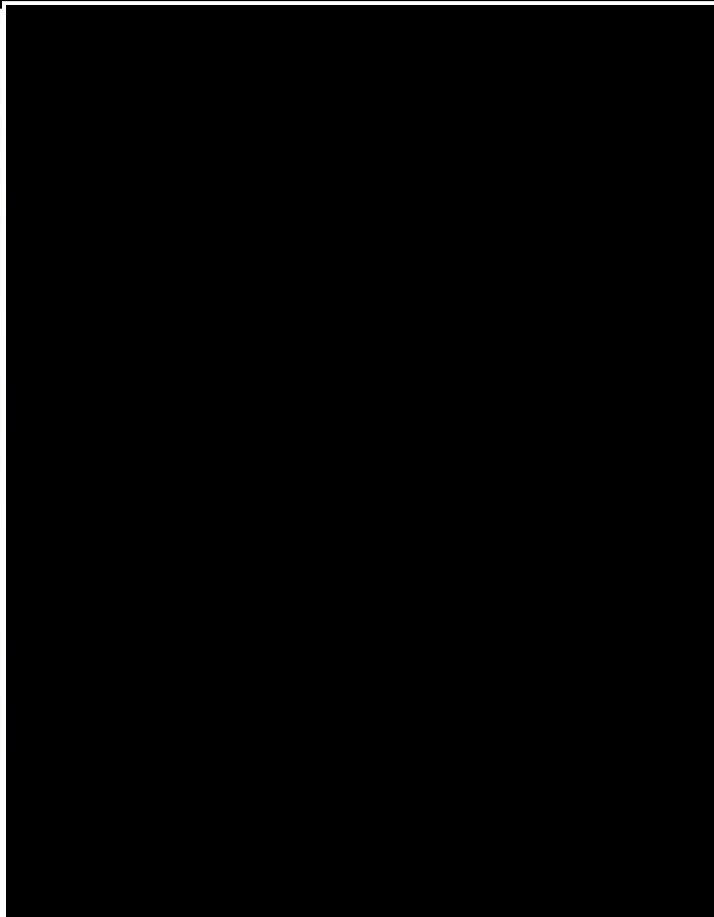
5 Below are the photos taken by ORA during its site visit:

1 **Figure 3-C: Station 203 Boosters – Photos by ORA during Site Visit**

2 ***** BEGIN CONFIDENTIAL*****



3



4

5 ***** END CONFIDENTIAL*****

1 As evident in ORA's photos, CWS has made improvements to the vault to make the
2 pump station more accessible by adding steps and platforms. Also, ORA's photos show
3 evidence that the valves have been serviced (new tubing on the valves) and painted.
4 Additionally, the vault is only about five feet deep as opposed to CWS's claimed "10 feet
5 depth."²⁵ Again, the existing pump station is accessible and the accessibility has been
6 improved by CWS by adding steps and ladders. CWS was able to service the valves and
7 it would have been able to service the pumps and motors that are next to the valves.

8 CWS's cost estimate for this project includes various other site improvements and
9 modifications in conjunction with rebuilding the station. If the station rebuild is not
10 necessary, the proposed site improvement and modifications are also not necessary.

11 *iv. CWS's claim: Station rebuild is necessary to accommodate the future*
12 *pumping capacity needs.*

13 Furthermore, the project justification states that the other purpose of the station rebuild is
14 to make it easy for CWS to expand the pumping capacity in the future. This is to
15 accommodate the future "firm pumping capacity" of 9,400 gpm (Peak Hour Demand
16 (PHD) in 2030) which was identified in the Rancho Dominguez District Water Supply
17 and Facilities Master Plan version 2009 (Dominguez Master Plan 2009).²⁶ This "future
18 pumping capacity" was projected based on the "existing" PHD (from the Dominguez
19 Master Plan 2009) of 5,870 gpm for the Zone 3. According to the current Dominguez
20 water demand identified in CWS's response to ORA Data Request BYU-009, the
21 Dominguez district's Zone 3 shows PHD of 2,791 gpm in 2014, less than half the 2009
22 measured level. Dominguez Master Plan 2009's "future pumping capacity" was not

²⁵ Dominguez District Project Justification, p. DOM PJ – 232.

²⁶ Rancho Dominguez Districts Water Supply and Facilities Master Plan 2009, p. 10-5.

1 based on the more updated information available today. Moreover, 2030 demand
2 projection does not need to be addressed in this GRC as CWS stated in its project
3 justification that “it is not required yet.”²⁷ Additionally, the “firm pumping capacity”
4 analysis assumed the purchase water connection at Zone 3 (West Basin Turnout, WB-35)
5 to be out of service. WB-35 is directly connected to the Zone 3 and has a capacity of
6 9,000 gpm.²⁸ Zone 3 is also supplied by a well at Station 290 (Well 90) which has a
7 capacity of 1,000 gpm. According to the information provided by CWS in response to
8 ORA Data Request BYU-005, the “firm pumping capacity” of Zone 3 (without
9 considering the WB-35) is 6,350 gpm.²⁹ When projecting the future demand, CWS
10 projected a 60% increase in PHD from 2009 to 2030 (from 5,870 gpm to 9,400 gpm) in
11 the Dominguez Master Plan 2009. Even though it might not be an exact figure, but for
12 the comparison purposes, if the 2014 PHD of 2,791 gpm would be increased by 60%, it
13 would be 4,466 gpm which is well within the existing “firm pumping capacity” of Zone 3
14 (6,350 gpm). Station 203 alone has a total pumping capacity of 5,350 gpm and the
15 station has an emergency generator to power the pumps during power outages. With the
16 current pumping capacity of Zone 3 (6,350 gpm), the capacity of WB-35(9,000 gpm),
17 and the current demand situation in Zone 3 (2,791 gpm of PHD in 2014), CWS does not
18 need to plan for a pumping capacity expansion in the foreseeable future. Also, the
19 assumption on which the Dominguez Master Plan 2009 made on the demand forecast is
20 unrealistic because it fails to consider the potential for prolonged drought impacts and
21 continued efforts for ongoing aggressive conservation measures to reduce water demand.

²⁷ Dominguez District Project Justification, p. DOM PJ – 232.

²⁸ Rancho Dominguez District Water Supply and Facilities Master Plan 2009, p. 4-3.

²⁹ CWS’s response to ORA Data Request BYU-005, Q.2.e., provided Table 10-2 from Dominguez Master Plan 2009 page 10-5; the table 10-2 shows 6,050 gpm, but when ORA added up all of the pumps’ capacities, it was 6,350 gpm.

1 In summary, CWS failed to prove its case on the existing vault configuration makes
2 repair or replacement of pumps expensive and complex. CWS failed to prove its case
3 that the current condition of the pumps warrant a full station rebuild project since a
4 problematic pump can be repaired or replaced. Also, CWS failed to prove its case that
5 there is a need for accommodating the future pumping capacity increase. Thus, the need
6 for station rebuild is unjustified. Along with other reasons discussed above, ORA
7 recommends that the Commission disallow the Station 203 rebuild project.

8 *g. New West Basin Wells & Treatment Facilities (PIDs 100482, 98333,*
9 *98334, 99341, 99522 & 101018)*

10 CWS requests \$7,284,039 in 2018 to design, drill, develop, and equip a new groundwater
11 supply well (West Basin Well-02, PID 98333) on Station 215/298 property including Ion
12 Exchange treatment facility. Also, CWS requests \$1,248,379 in 2017 to purchase a
13 property in the Dominguez District (PID 100482), \$3,749,017 in 2018 to design, drill,
14 develop and equip a new groundwater supply well (West Basin Well-03, PID 98334).
15 CWS also requests designing of a treatment system for West Basin Well-03 in 2018 in
16 the amount of \$397,011 (included in the \$3.7 million above) and plans to request
17 construction of a treatment system (\$5.3 million) in a subsequent GRC.³⁰ Additionally,
18 CWS requests the following budgets to install an Ion Exchange (IX) Treatment at three
19 wells:

- 20 • DOM 297: \$4,910,530 in 2018,
- 21 • DOM 272: \$5,529,317 in 2018,
- 22 • DOM 219: \$5,244,694 in 2018.

³⁰ CWS Dominguez Project Justifications, p. DOM PJ-348, CWS estimates the treatment construction cost in the future GRC to be \$5.3 million.

1 The total scope of the requested new wells and treatment projects for maximizing
2 Dominguez District's pumping rights in the West Basin is summarized in the following
3 table:

4 **Table 3-G: Total Scope of New Wells and Treatment Requests for Dominguez**

Year	PID	Description	Budget Account	CWS Request	Subtotal for each project group
2017	100482	Property purchase for WB Well-03	01 LAND	\$ 1,248,379	
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	02 STRUC	\$ 561,991	subtotal for WB Well-02 (PID 98333)
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	03 WELLS	\$ 1,596,306	\$ 7,284,039
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	05 PUMPS	\$ 489,945	
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	06 PURIFICATION	\$ 4,635,797	
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	02 STRUC	\$ 739,750	Subtotal for WB Well-03 (PID 98334), Land (PID 100482) and Future Treatment (PID 101005)
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	03 WELLS	\$ 1,735,477	\$ 10,297,396
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	05 PUMPS	\$ 876,780	
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	06 PURIFICATION	\$ 397,011	
Future GRC	101005	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	06 PURIFICATION	\$ 5,300,000	
2018	99341	DOM 297-01 Ion Exchange Treatment	02 STRUC	\$ 432,938	Subtotal for IX Treatment at DOM 219, 272 & 297
2018	99341	DOM 297-01 Ion Exchange Treatment	06 PURIFICATION	\$ 4,477,591	\$ 15,684,540.07
2018	99522	DOM 272-01 Ion Exchange Treatment	02 STRUC	\$ 411,324	
2018	99522	DOM 272-01 Ion Exchange Treatment	06 PURIFICATION	\$ 5,117,993	
2018	101018	DOM 219-02 Ion Exchange treatment	02 STRUC	\$ 434,745	
2018	101018	DOM 219-02 Ion Exchange treatment	05 PUMPS	\$ 303,647	
2018	101018	DOM 219-02 Ion Exchange treatment	06 PURIFICATION	\$ 4,506,301	
		Total Scope		\$ 33,265,975	

CWS’s project justification states that these projects are needed in order to maximize the use of the district’s groundwater pumping rights in the West Basin, thereby, offsetting the cost of purchasing water from the West Basin Municipal Water District (WBMWD).³¹

Also, according to CWS’s project justification, the construction of the new wells and constructing treatment facilities in the Dominguez District was recommended in CWS’s supply optimization study.

i. Verifying the need for the additional groundwater production.

The combined groundwater production increase presented in the project justification is as follows in **Table 3-H**:

Table 3-H: Additional Groundwater Production by Proposed Projects

Project Location	Additional Production (AFY)
West Basin Well-02	2,900
West Basin Well-03	2,900
DOM Well 219	730
DOM Well 272	1,020
DOM Well 297	580
TOTAL	8,130 (6,530)³²

The above production assumes 90% of well operation throughout the year. ORA checked the most recent (2014) production data provided in CWS’s response to ORA Data Request BYU-009. According to the data request response, the Dominguez District’s total production in 2014 was 1,948 MG (=5,975 AF). From the same data request response, the district’s total import in 2014 was 9,078 MG (=27,859 AF). According to CWS’s Dominguez Master Plan 2009, the total well capacity is 12,660 gpm (=20,434

³¹ CWS Project Justifications, p. DOM PJ-349.

³² According to CWS Project Justifications, p. DOM PJ-349, wells 272 and 297 are currently active. Adding treatment to these wells would not increase the groundwater production.

1 AFY) Then, ORA compared the total well capacity of 20,434 AFY and 2014 total
2 production of 5,975 AFY and derived that the wells at the Dominguez District were
3 operating at 29% of capacity. Also, the summary sheet provided in CWS's response to
4 ORA Data Request BYU-009 shows the following demands for the district in 2014:

- 5 • Total Average Day Demand (ADD) = 20,970 gpm (=11,025 MG per year =
6 33,834 AFY)
- 7 • Total Maximum Day Demand (MDD) = 31,455 gpm (=16,533 MG per year =
8 50,738 AFY)
- 9 • Total Peak Hourly Demand (PHD) = 47,182 gpm (=24,799 MG per year = 76,105
10 AFY)

11 CWS's project justification asserts that the cost savings proposed to be achieved by these
12 projects (pumping water costs cheaper than purchasing water) would be \$2,525,373 for
13 the first year and will continue to grow. CWS's proposed savings include the following
14 assumptions: wells running 90% of the time, rate of return of 7.94%, pumping expense
15 of \$662 per AF, and purchase water cost of \$1,421 per AF. CWS's proposed projects
16 total construction cost was \$33,265,975 and the total proposed production was 8,130
17 AFY. Then, CWS's first year total revenue requirement³³ would be \$10,457,088 and the
18 purchased water cost estimate for the first year would be \$11,552,730 if these projects
19 were not built. Based on the difference between the purchased water cost and the
20 revenue requirement, CWS argues that the proposed projects are beneficial to the
21 ratepayers even from year zero. ORA found CWS's argument erroneous because for the
22 first year, purchasing water is still less expensive. ORA recalculated the cost difference
23 between the proposed projects' total revenue requirement and the purchased water cost

³³ Total revenue requirement includes: property tax (1.2%), Pumping Expense (\$662/AF), Plant Revenue Requirement (capital cost x rate of return x Net to Gross Multiplier), and Depreciation Expense (Component Depreciation Rate x capital cost).

based on 29% well runtime, rate of return of 7.94%, and the same pumping expense of \$662 per AF and purchased water cost of \$1,421 per AF. ORA's calculation results in 2,620 AFY of total productions from the 29% runtime. ORA's first year revenue requirement would be \$6,809,468 and the purchased water cost for the first year would be \$3,723,020. ORA's calculation shows the first year revenue requirement is almost \$3.5 million more than the purchased water cost. Thus, the projects are not cost beneficial to the ratepayers. See **Table 3-I** below for the summary of CWS's and ORA's calculations.

Table 3-I: Revenue Requirement and Purchase Water Cost

ROR	7.94%			CWS	ORA
NTG	1.35747		Plant Rev. Req.	\$ 3,585,511	\$ 3,585,511
Property Tax	1.20%		Prop. Tax	\$ 399,192	\$ 399,192
Depreciation Expense (Table 3-H below)			Depr. Expense	\$ 1,090,325	\$ 1,090,325
Pumping Expense (\$662/AF)			Pump. Exp.	\$ 5,382,060	\$ 1,734,440
Purchased Water (\$1421/AF)			Total Rev. Requirement	\$ 10,457,088	\$ 6,809,468
West Basin Charge (\$) per AF	156		West Basin Charge	\$ 1,268,280	\$ 408,720
Proposed Production at 90% runtime (AFY) - CWS	8130		Purchased Water Cost	\$ 11,552,730	
Historical Production at 29% runtime (AFY) - ORA	2620				\$ 3,723,020
			(Rev. Req. + WB Charge) minus Purchase Cost	\$ 172,638	\$ 3,495,168

ORA's calculation of the total revenue requirement includes depreciation expense which is presented in the table below. Since the requested projects includes different categories of construction components, ORA used the Component Depreciation Rate found in the Dominguez work paper (Table9B2proposed) and applied it to the appropriate categories.

1

Table 3-J: ORA's Calculations on Depreciation Expense

Year	PID	Description	Budget Account	CWS Request	Component Depreciation Rate	Depreciation Expense
2017	100482	Property purchase for WB Well-03	01 LAND	\$ 1,248,379		\$ -
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	02 STRUC	\$ 561,991	3.28%	\$ 18,433
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	03 WELLS	\$ 1,596,306	5.34%	\$ 85,243
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	05 PUMPS	\$ 489,945	3.33%	\$ 16,315
2018	98333	Drill, Develop, Equip and Treatment at New Well - West Basin (Well-02)	06 PURIFICATION	\$ 4,635,797	3.16%	\$ 146,491
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	02 STRUC	\$ 739,750	3.28%	\$ 24,264
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	03 WELLS	\$ 1,735,477	5.34%	\$ 92,674
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	05 PUMPS	\$ 876,780	3.33%	\$ 29,197
2018	98334	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	06 PURIFICATION	\$ 397,011	3.16%	\$ 12,546
Future GRC	101005	Drilling, Development, Equipping and Design of Treatment Facility for New Well - West Basin Well-03 (Property purchase under FP 100482. Treatment Facility construction under FP 101005)	06 PURIFICATION	\$ 5,300,000	3.16%	\$ 167,480
2018	99341	DOM 297-01 Ion Exchange Treatment	02 STRUC	\$ 432,938	3.28%	\$ 14,200
2018	99341	DOM 297-01 Ion Exchange Treatment	06 PURIFICATION	\$ 4,477,591	3.16%	\$ 141,492
2018	99522	DOM 272-01 Ion Exchange Treatment	02 STRUC	\$ 411,324	3.28%	\$ 13,491
2018	99522	DOM 272-01 Ion Exchange Treatment	06 PURIFICATION	\$ 5,117,993	3.16%	\$ 161,729
2018	101018	DOM 219-02 Ion Exchange treatment	02 STRUC	\$ 434,745	3.28%	\$ 14,260
2018	101018	DOM 219-02 Ion Exchange treatment	05 PUMPS	\$ 303,647	3.33%	\$ 10,111
2018	101018	DOM 219-02 Ion Exchange treatment	06 PURIFICATION	\$ 4,506,301	3.16%	\$ 142,399
Total				\$ 33,265,975		\$ 1,090,325

2

Another aspect of the proposed projects is CWS's intention on utilizing its groundwater pumping rights. CWS's project justification makes reference to its Supply Optimization Study and the study recommended developing wells in the Dominguez District to utilize the pumping rights to replace the purchased water supply. According to the project justification, the Dominguez District has pumping rights of 10,417 AFY in the West Basin and 6,998 AFY in the Central Basin. The aforementioned Supply Optimization Study recommends developing one (1) new well in the West Basin and three (3) new wells in the Central Basin. Contrary to the recommendation made by the Supply Optimization Study, CWS requests two (2) new wells in the West Basin area in this GRC: West Basin Well-02, PID 98333; and West Basin Well-03, PID 98334. As it was mentioned earlier, ORA noticed that the Dominguez District produced (pumped) 5,975 AF in 2014 and purchased (imported) 27,859 AF in 2014. Also mentioned earlier, the

1 Dominguez District has the total well capacity of 20,434 AFY. It is puzzling why CWS
2 has pumped only 29% (5,975 AFY vs. 20,434 AFY) of its well capacity. Then, ORA
3 found the following information from CWS's Dominguez Master Plan 2009:³⁴

4 Cal Water and WBMWD (West Basin Municipal Water District) have a purchase
5 agreement that establishes a Base Allocation of 71,790 AFY, a Tier 1 Annual
6 Maximum of 64,611 AFY, and a Purchase Commitment of 212,466 AFY. The
7 Base Allocation refers to Cal Water's share of WBMWD's share of MWD water.
8 The Base Allocation is used to calculate the Tier 1 Annual Maximum amount (90%
9 of Base Allocation) and the Purchase Commitment amount (60% of Base
10 Allocation times five).

11 The allocations established in the purchase agreement with WBMWD are for all
12 Cal Water districts combined. Cal Water in turn has developed allocations for
13 each district as follows:

14 * Dominguez – 20,675 AFY

15 ...

16 So, based on CWS's agreement with WBMWD, it must purchase at least 20,675 AFY.
17 With the proposed projects, CWS is proposing to add 5,530 AFY of well capacity to the
18 Dominguez District.³⁵ According to the information found in the CWS Urban Water
19 Management Plan 2010 Dominguez District, Appendix H, WBMWD will charge CWS
20 for the volume of water that CWS did not meet the purchase commitment. Applicable
21 rate for this charge is Tier 1 Supply Rate which is \$156 per AF currently. If the proposed
22 projects were built and CWS could not meet the purchase commitment, for each AF of
23 water added to the supply would incur the WBMWD charge. This charge is presented in
24 **Table 3-I** above as WB Charges.

³⁴ Water Supply and Facilities Master Plan, Rancho Dominguez District, 2009, pp. 8-3 to 8-5.

³⁵ 8,130 AFY of Total Production capacity of the proposed projects minus the capacities of Well 272 and 297 since these are currently in operation with water quality issues that does not have an impact on human health.

1 The proposed wells are not needed because CWS has been under-utilizing the pumping
2 capacity of existing wells in the system. CWS should revise its operation to increase the
3 pumping from its existing wells, before adding any new wells. Data shown above
4 indicate the wells in the Dominguez District were not fully utilized: only 29% of the
5 existing total well capacity has been used in 2014. CWS should explore operational
6 alternatives to increase pumping from the existing well rather than proposing to add new
7 wells to increase its pumping capacity to compensate for the purchased water amount.
8 Moreover, according to the State Water Resources Control Board, Dominguez District
9 achieved 17.9% of cumulative savings as compared to 2013 demand.³⁶ CWS's 2013 total
10 supply (also means the total consumption) was 33,879 AF (Pumped 5,872 AF and
11 Purchased 28,006 AF). 17.9% reduction from the 2013 total consumption would be
12 27,815 AF. This is almost as much as 2013 purchased water volume. ORA concludes
13 that with the current conservation measures, CWS does not need to add groundwater
14 productions in the Dominguez District.

15 *ii. New West Basin Well-02 & Treatment Facility (PID 98333)*

16 CWS requests \$7,284,039 in 2018 to design, drill, develop and equip a new groundwater
17 supply well on Station 215/298 property including Ion Exchange treatment facility.
18 According to the 2012 GRC Settlement Agreement document, on page 215, it states:

19 The parties agree to advice letter treatment for the construction of wells at
20 existing properties under Project 20838 at the Alameda Property (Station 298/215)
21 for \$1,974 million If the comprehensive study shows that these wells need
22 individual treatment, Cal Water may include in its advice letter filing additional
23 \$4.6 million at each site for treatment

24 According to the settlement resolution from 2012 GRC TY 2014, this project is on the
25 Advice Letter projects list. This is an Advice Letter project for 2015 with a cap amount

1 of \$6,617,000.³⁷ CWS is re-requesting this project in this GRC, which indicates that this
2 project was never started and that the company does not intend to submit an advice letter.
3 Also, ORA already discussed that the additional wells in the Dominguez District is not
4 necessary at this time. Even though this project was authorized in the previous GRC (as
5 an Advice Letter Project), it has not been built and with the new information reviewed by
6 ORA determined that this project is not necessary. Therefore, ORA recommends the
7 Commission deny CWS's request of a new well at Station 298/215. Furthermore, ORA
8 requests the Commission rescind the Advice Letter status of Project 20838 from 2012
9 GRC by canceling the project.

10 *iii. New West Basin Well 03 & Treatment Facility (PID 98334)*

11 CWS requests \$3,749,017 in 2018 to design, drill, develop, and equip a new groundwater
12 supply well on a property that would be purchased through PID 100482 (\$1,248,379 in
13 2017). CWS is not requesting a budget for a treatment facility construction (estimated at
14 \$5.3 million) at this time and defers it to future GRC.³⁸ According to CWS's project
15 justification, the construction of a new well in the district was recommended in CWS's
16 supply optimization study.

17 This project is contingent upon successful procurement of a property (PID 100482) in
18 Dominguez District. Also, the project justification states that the supply optimization
19 study recommended one (1) new well in the West Basin and three (3) new wells in the
20 Central Basin. CWS already requested West Basin Well-02 in the district (PID 98333).
21 This project request (PID 98334) contradicts CWS's own study. In CWS's response to
22 ORA Data Request BYU-005, CWS admits that the number of wells recommended in

³⁷ 2012 GRC Settlement Document, p. 213.

³⁸ CWS Dominguez Project Justifications, p. DOM PJ-348.

1 each basin is true and CWS states, in the response that "... the second well requested in
2 the West Basin area MAY BE transferred and utilized for a well in the Central Basin."
3 [Emphasis Added] The property purchase project (PID 100482) was based on properties
4 in the vicinity of the West Basin area and the new (Well-03, PID 98334) request is
5 contingent upon the procurement of property under PID 100482. ORA finds it hard to
6 understand CWS's process of transferring a new well project in the West Basin to the
7 Central Basin where CWS's proposal presented in the project justification was based on
8 the vicinity of the West Basin.

9 In addition to ORA's aforementioned argument on the new wells are not needed in the
10 Dominguez District, ORA finds the New West Basin Well-03 project request unjustified
11 by contradicting with CWS's own recommendations in the Supply Optimization Study;
12 therefore, ORA recommends the Commission disallow CWS's request for a new West
13 Basin Well-03 projects (PIDs 100482 and 98334 and the Treatment Facility for the Well-
14 03).

15 *iv. Ion Exchange (IX) Treatment at DOM 297, 272 and 219 (PIDs 99341, 99522*
16 *& 101018)*

17 These projects were briefly mentioned and the three wells' capacities were considered in
18 the discussions from above section. The total scope of the IX Treatment system request
19 at the three stations is \$15,684,540 as it was presented in the **Table 3-J** above. ORA
20 made a similar revenue requirement calculation for the IX Treatment projects only and
21 the result is summarized in the below table:

Table 3-K: Revenue Requirement Calculation for the IX Treatment Projects³⁹

ROR	7.94%			CWS	ORA
NTG	1.35747		Plant Rev. Req.	\$ 1,690,529	\$ 1,690,529
Property Tax	1.20%		Prop. Tax	\$ 188,214	\$ 188,214
Depreciation Expense (Table 3-J below)			Depr. Expense	\$ 497,682	\$ 497,682
Pumping Expense (\$662/AF)			Pump. Exp.	\$ 1,542,460	\$ 497,015
Purchased Water (\$1421/AF)			Total Rev. Requirement	\$ 3,918,886	\$ 2,873,440
West Basin Charge (\$) per AF	156		West Basin Charge	\$ 363,480	\$ 117,121
Proposed Production at 90% runtime (AFY) - CWS	2330		Purchased Water Cost	\$ 3,310,930	
Historical Production at 29% runtime (AFY) - ORA	751				\$ 1,066,855
			(Rev. Req. + WB Charge) minus Purchase Cost	\$ 971,436	\$ 1,923,707

ORA's calculation of the total revenue requirement includes depreciation expense which is presented in the **Table 3-L** below. Since the requested projects includes different categories of construction components, ORA used the Component Depreciation Rate found in the Dominguez work paper (Table9B2proposed) and applied it to the appropriate categories.

Table 3-L: ORA's Calculation on Depreciation Expense

Year	PID	Description	Budget Account	CWS Request	Component Depreciation Rate	Depreciation Expense
2018	99341	DOM 297-01 Ion Exchange Treatment	02 STRUC	\$ 432,938	3.28%	\$ 14,200
2018	99341	DOM 297-01 Ion Exchange Treatment	06 PURIFICATION	\$ 4,477,591	3.16%	\$ 141,492
2018	99522	DOM 272-01 Ion Exchange Treatment	02 STRUC	\$ 411,324	3.28%	\$ 13,491
2018	99522	DOM 272-01 Ion Exchange Treatment	06 PURIFICATION	\$ 5,117,993	3.16%	\$ 161,729
2018	101018	DOM 219-02 Ion Exchange treatment	02 STRUC	\$ 434,745	3.28%	\$ 14,260
2018	101018	DOM 219-02 Ion Exchange treatment	05 PUMPS	\$ 303,647	3.33%	\$ 10,111
2018	101018	DOM 219-02 Ion Exchange treatment	06 PURIFICATION	\$ 4,506,301	3.16%	\$ 142,399
		Total		\$ 15,684,540		\$ 497,682

As it is presented in the **Table 3-K** above, the requested IX Treatment projects are not cost effective because the revenue requirement is higher than the purchase water cost in both CWS's and ORA's estimates.

³⁹ According to the information provided in CWS response to ORA Data Request BYU-005, CWS estimates 730 AFY for DOM 219, 1020 AFY for DOM 272 and 580 AFY for DOM 297. All of these estimated annual pumping capacities are based on 90% runtime. ORA's annual pumping capacity is calculated based on 29% runtime.

1 According to CWS's project justification, Wells 297-01 and 272-02 are in active status
2 currently. CWS requests about \$5 million for each treatment system to "prevent" the
3 wells from being placed on standby status. According to the water quality information
4 presented in the project justification, DOM 297 and 272 have levels of color over the
5 Secondary Maximum Contaminant Level (SMCL). Both DOM 297 and 272 have some
6 levels of Ammonia and Total Organic Carbon (TOC), but there is no SMCL specified by
7 the State Water Resources Control Board, Division of Drinking Water (DDW) for these
8 two constituents. CWS's data trending graphs provided in the project justification does
9 not indicate SMCL for these two constituents.⁴⁰ Additionally, DOM 272 has levels of
10 methane over the SMCL. The water quality issues presented by CWS on these wells are
11 secondary in nature. For the DOM 219 Well, the project justification states that the Well
12 219-02 is in an "inactive" status.

13 ORA asked CWS about the possibility of blending to lower the level of contamination in
14 ORA Data Request BYU-005. According to CWS's response to ORA's Data Request
15 BYU-005, CWS did not consider the blending as an alternative because of the following:

- 16 • *Blending is possible only if the interconnecting piping is readily available*

17 CWS basically re-stated the supply optimization study's general description about the
18 blending. It did not identify whether the interconnecting piping is available at the three
19 wells. Even if there is no interconnecting piping, CWS should evaluate the feasibility of
20 constructing interconnecting piping for blending purposes and perform a cost benefit
21 analysis for this option.

⁴⁰ CWS Dominguez Project Justifications, pp. DOM PJ-351 to 354.

- 1 • *Blending is unreliable because it requires both sources (purchased water and the*
2 *well water) to be available at the same time. If one source is down, the other*
3 *source may not be used.*

4 CWS’s claim is only true when the purchased water becomes unavailable. However, the
5 water that CWS purchases from the West Basin MWD and the Central Basin MWD is
6 labeled as “non-interruptible water” and CWS is paying for surcharges to the West Basin
7 to have the water available at all times.⁴¹ When water from the well becomes unavailable,
8 the purchased water connection is maintained and the system can be served by the
9 purchased water only. Thus, CWS’s scenario is highly unlikely.

- 10 • *Blending will likely increase the potential for nitrification*

11 CWS did not provide any convincing evidence to show that the blending “will likely
12 increase” nitrification. In stating so, CWS did not provide any information how much it
13 will be increased and how serious that increased level is. CWS’s claims on the
14 possibility of nitrification are due to different disinfectants used by the MWD and CWS:
15 chloramine and chlorine. These two materials react with each other and can make the
16 mixed water vulnerable for nitrification. However, with proper circulation, nitrification
17 can be minimized. Thus, without CWS providing the severity of the nitrification caused
18 by blending, it’s difficult to verify CWS’s claim on nitrification as a threat to blending.
19 CWS can add more chlorine to the blended water if the chlorine level becomes lower. In
20 the 2012 GRC Settlement document, CWS was authorized to conduct a Nitrification
21 Control Study (Project 63837, \$200,000, in 2014) as an Advice Letter project. CWS did
22 not present such study in this GRC.

⁴¹ CWS Water Supply and Facilities Master Plan, Rancho Dominguez, 2009, p. 8-4.

1 Additionally, CWS's project justification does not provide any information regarding the
2 water quality of Well 219-02 since the well is inactive currently. Also, according to
3 CWS's response to ORA Data Request BYU-005, CWS states that the supply study DID
4 NOT recommend any treatment for Well 219-02. [Emphasis Added] The response also
5 states that the well does not have ANY recent water quality data, but CWS requested a
6 treatment based on an ASSUMPTION that the water quality would be similar. [Emphasis
7 Added] According to the 2012 GRC Settlement document, CWS was authorized to
8 conduct a water quality audit to determine treatment requirements for Well 219-02 (PID
9 21521, \$151,200 in 2013). CWS did not present any results from such water quality
10 audit in this GRC.

11 As discussed above, CWS did not present convincing evidence to show whether the
12 treatment of these facilities are cost effective. ORA's analysis and discussion presented
13 in the previous section of this chapter shows the treatment of wells DOM 297 and 272
14 does not help offset the purchase water quantity since these wells are currently in service.
15 Moreover, CWS's request for a treatment at Well 219-02 is not justified since it was
16 based on an assumption. CWS did not provide any information on the water quality of
17 the well DOM 219, but stated the following in its response to ORA Data Request BYU-
18 005:

19 The Supply Study did not recommend any treatment for DOM 219 as this well
20 does not have any recent water quality data. Cal Water proposed IX treatment
21 with the assumption that resulting water quality would be similar to other wells in
22 the system given their proximity.⁴²

23 Therefore, ORA recommends the Commission disallow CWS's request for treatments at
24 all three wells.

⁴² CWS response to ORA Data Request BYU-005, Question 6.a.

2. Non-Specific Budgets for 2016-2018

CWS requests \$4,178,900 in the Non-specific Budget to address unforeseen, unplanned, and emergency projects and regulatory compliant projects. ORA's Report on Plant - Common Issues presents its recommended total disallowance of this budget.

3. 2015 Capital Budget

CWS requests approximately \$21.6 million for plant additions in 2015, which consist of projects authorized for year 2015 and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents ORA's recommended total disallowance of this budget.

D. CONCLUSION

ORA's recommendations presented above have been incorporated in the calculations for recommended Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix RO.

Chapter 4: Plant – Rancho Dominguez

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Rancho Dominguez District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 4-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Vehicle Replacement, Non Specific Budget, and 2015 Capital Budget. **Table 4-B** presents ORA project-specific adjustments.

Table 4-A: Capital Budget Summary – Rancho Dominguez District

Rancho Dominguez (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 76.2	\$ 325.6	\$ 194.7	\$ 324.9	\$ 230.3
CWS	\$ 359.7	\$ 1,145.3	\$ 385.2	\$ 663.3	\$ 638.4
CWS > ORA	\$ 283.5	\$ 819.7	\$ 190.5	\$ 338.5	\$ 408.0
ORA as % of CWS	21%	28%	51%	49%	37%

Table 4-B: Capital Budget Details – Rancho Dominguez District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
		None	\$ -	\$ -	\$ -	-
Specifics Total			\$ -	\$ -	\$ -	-
Non-Specifics Total			\$ 72,200	\$ 253,339	\$ 181,139	28%
Carry-Overs Total			\$ 3,952	\$ 106,330	\$ 102,378	4%
TOTAL 2015			\$ 76,152	\$ 359,669	\$ 283,517	21%

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00098464	Convert the Media Center Room to an Emergency Operation Center.	\$ -	\$ 98,059	\$ 98,059	0%
	00098464	Convert the Media Center Room to an Emergency Operation Center.	\$ -	\$ 75,137	\$ 75,137	0%
	00099216	Vehicle Replacements > 120,000 miles	\$ 325,610	\$ 450,172	\$ 124,562	72%
	00099419	Replace current hydraulic valve truck	\$ -	\$ 98,339	\$ 98,339	0%
	00099460	Vehicle - 2.5 Ton- Vac Truck Unit w/ Accessories & Mobile Radio	\$ -	\$ 316,268	\$ 316,268	0%
Specifics Total			\$ 325,610	\$ 1,037,975	\$ 712,366	31%
Non-Specifics Total			\$ -	\$ 107,300	\$ 107,300	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2016			\$ 325,610	\$ 1,145,275	\$ 819,666	28%

1

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099084	Replace Air Compressor in the Dominguez District	\$ 20,081	\$ 20,081	\$ -	100%
	00099220	Vehicle Replacements > 120,000 miles	\$ 174,660	\$ 255,352	\$ 80,692	68%
Specifics Total			\$ 194,741	\$ 275,433	\$ 80,692	71%
Non-Specifics Total			\$ -	\$ 109,800	\$ 109,800	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2017			\$ 194,741	\$ 385,233	\$ 190,492	51%

2

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099085	Replace Air Compressor in the Dominguez District	\$ 20,583	\$ 20,583	\$ -	100%
	00099222	Vehicle Replacements > 120,000 miles	\$ 304,295	\$ 530,360	\$ 226,065	57%
Specifics Total			\$ 324,878	\$ 550,943	\$ 226,065	59%
Non-Specifics Total			\$ -	\$ 112,400	\$ 112,400	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2018			\$ 324,878	\$ 663,343	\$ 338,465	49%

3

4

C. DISCUSSION

5

The Rancho Dominguez District recorded \$418,585 per year in average gross plant

6

additions for the most recent six-year period 2009-2014. Table 4-C compares CWS's and

7

ORA's estimates against recorded annual average gross plant additions.

Table 4-C: Capital Budget Summary vs. Recorded Expenditures– Dominguez District

Rancho Dominguez (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 418.6	100%
ORA	\$ 76.2	\$ 325.6	\$ 194.7	\$ 324.9	\$ 230.3	55%
CWS	\$ 359.7	\$ 1,145.3	\$ 385.2	\$ 663.3	\$ 638.4	153%

ORA presents a discussion on its analyses and recommended adjustments to CWS’s requested capital budget for specific projects (Section 1), 2016-2018 non-specific projects (Section 2), and 2015 capital budget (Section 3) below.

1. Specific Projects

a. Convert Media Center to Emergency Operation Center (PID 98464)

CWS requests \$173,197 in 2016 to modify the existing media center to an Emergency Operation Center (EOC). CWS claims the need for this project is “imperative.” CWS also claims in its project justification that “in case of emergency,” this can be used for emergency preparedness, emergency management, and disaster management functions.

During ORA’s field visit, ORA witnessed the existing media center could be used to perform all of the functions of the requested EOC. The existing media center has the capability of projecting the status of CWS’s assets via the media center computer that is connected to CWS’s network. Also, the media center has the capability of video conferencing to maintain communication with others. According to CWS’s response to ORA Data Request BYU-015, Question 3.j, CWS admits it is possible to modify the existing monitors to allow SCADA viewing. CWS’s data request response explains the terminology used in the project justification. CWS states that the “Media Center” it is

1 proposing to convert to the EOC is currently used as a “large meeting room.” According
2 to the same data request response, CWS states the current “Media Center” does not have
3 any monitors.⁴³ Also, in the same data request response, CWS explains ORA’s “assumed”
4 media center is actually a Video Conferencing Room. ORA could not imagine a meeting
5 room that does not have a single monitor would be called a “Media Center” when ORA
6 was reviewing the project justification. The Video Conferencing Room which had a
7 computer, multiple monitors, and video conferencing capability better suited to be called
8 a Media Center. Nevertheless, according to CWS’s response to ORA Data Request
9 BYU-015, Question 3.a, the existing Video Conference Room is approximately 24 ft. X
10 14 ft. and can accommodate 12 people around the table. According to the same data
11 request response, Question 3.b, the existing large meeting room (Media Center) is
12 approximately 24 ft. X 40 ft. CWS’s request for the new EOC (which will be the existing
13 large meeting room) is to make improvements to the room, add four 46-inch display
14 panels, and add two 80-inch “touch integrated” display screens, a camera for video
15 conference, three hard cases with casters for equipment storage, and five new laptops.

16 According to CWS’s response to ORA Data Request BYU-005, CWS states these
17 multiple monitors are necessary for the management, operations, logistics and planning
18 sections can see the same data in order to manage the emergency. ORA’s observation
19 during the site visit estimates that all of the above mentioned management could occupy
20 the existing video conference room and function. If CWS is requesting a lot more people
21 need to occupy the media center during an emergency (more than the 12 it had identified),
22 then CWS is not planning to go out to the field to address the issues. The emergency
23 command should be concise, since it’s unrealistic that all management would need to be
24 in the EOC room, while none would be out in the field accessing the emergency.

⁴³ CWS response to ORA Data Request BYU-015, Question 3.j.

1 According to CWS’s response to ORA Data Request BYU-015, Question 3.d, CWS
2 estimates 17 to 19 people to occupy the EOC during emergencies. It may be true during
3 a paper exercise or training where the participants need to simulate the situation. But
4 during a real emergency, having that many people in the “command center” would
5 aggravate the decision making. ORA believes the existing space in the Video Conference
6 Room would suffice for the purpose of an EOC.

7 CWS estimates \$5,000 for each of the 46-inch displays it requests for the EOC.⁴⁴ Well
8 known premium brands such as Sony, Samsung, and LG manufactured 46-inch to 48-
9 inch screens are available for under \$500.⁴⁵ When ORA asked CWS to justify the need
10 of the array of large screens, CWS states that the room full of people needs to see the
11 screen during an emergency.⁴⁶ ORA believes, during an emergency, all available
12 resources should be dispatched to areas with trouble to bring back services; only the
13 operations and engineering managements should occupy the EOC to control the situation.
14 Thus, EOC does not need to be larger than the existing Video Conference Room and does
15 not need to have four large screens.

16 CWS estimates \$12,900 for each of the 80-inch, “touch integrated,” displays it is
17 requesting (on top of the four 46-inch screens) for the EOC. Well known premium
18 brands such as Sharp and Vizio manufactured 80-inch screens are available for under

⁴⁴ Dominguez Project Justification, p. DOM PJ-474.

⁴⁵ <http://www.bestbuy.com/site/sony-bravia-48-class-47-5-8-diag--led-1080p-smart-hdtv-black>
<http://www.target.com/p/samsung-48in-flat-panel-tv-1080p-60-hz-tv-black-un48j5000afxza>
<http://www.bestbuy.com/site/lg-49-class-48-5-diag--led-1080p-hdtv-black>

⁴⁶ CWS response to ORA Data Request BYU-005, question 7.a.

1 \$4,000.⁴⁷ When ORA asked CWS for the need of “touch integrated” 80-inch screens,
2 CWS’s response to ORA’s Data Request BYU-005 indicates it is needed to display maps,
3 and deliver images to field personnel. However, CWS’s response failed to provide any
4 information regarding the need for the “touch” capability of the screen. According to the
5 additional information provided by CWS in its response to ORA Data Request BYU-015,
6 Question 3.h, CWS states the touch function is needed for CWS personnel to be able to
7 draw on the map in real time and show it to other participants in the room. The purpose
8 of an EOC is not for press conference where participants need to be educated. CWS’s
9 personnel occupying the room during emergency should be able to picture the ins and
10 outs of CWS’s system and if it is necessary to draw or write on the map, CWS’s
11 personnel can do so on the existing system maps that are currently hung on the walls.
12 CWS’s personnel can certainly do the same marking or making notes on the paper maps
13 it has in the office. ORA does not believe two 80-inch touch integrated displays are
14 needed.

15 CWS requests a new camera for video conference, but the existing Video Conference
16 Room already has video conferencing capability.

17 CWS requests five new laptops, but during an emergency, the existing computers and
18 laptops at its Rancho Dominguez office can be used to cover the proposed functions.
19 When ORA asked about the need for the extra sets of laptops, CWS failed to justify the
20 need for the extra laptops other than these are what CWS uses.⁴⁸ If new laptops were
21 purchased for the purpose of the EOC only, then the laptops won’t be used but be aged

⁴⁷ <http://www.target.com/p/vizio-80-class-2160p-240-hz-uhd-full-array-led-4k-smart-tv-black-m80-c3>
http://www.crutchfield.com/p_28480UE30U/Sharp-LC-80UE30U.html

⁴⁸ CWS’s response to ORA Data Request BYU-005, question 7.c.

1 until an emergency occurs. If CWS wishes to purchase extra laptops, it should justify the
2 purchase with a proper reason.

3 In summary, ORA finds CWS's request for an EOC unnecessary since CWS did not
4 provide convincing justification for the need of a new EOC. Further, in time of
5 emergency, CWS's existing Video Conference Room has the capability to quickly
6 assume that role. Therefore, ORA recommends that the Commission disallow CWS's
7 request.

8 *b. Vehicle Replacement (PIDs 99216, 99220 & 99222)*

9 CWS requests \$450,172 in 2016, \$255,352 in 2017 and \$530,360 in 2018 to replace
10 vehicles in the Rancho Dominguez district fleet. Rancho Dominguez District manages its
11 district fleet vehicles for CWS's Dominguez, Hermosa Redondo and Palos Verdes
12 Districts. Thus, CWS's work papers for the three districts (Dominguez, Hermosa
13 Redondo, and Palos Verdes) do not request vehicle replacements. CWS requested total of
14 26 vehicles to be replaced in this GRC, but ORA recommends disallowance of 6 vehicle
15 replacements for the reasons presented in ORA's Report on Plant – Common Issues.
16 ORA recommends the following budgets for vehicle replacements:

17 2016 - \$325,610

18 2017 - \$174,660

19 2018 - \$304,295

20 *c. Additional Vehicles (PIDs 99419 & 99460)*

21 CWS requests \$98,339 in 2016 to replace the existing hydraulic valve truck (PID 99419).
22 CWS did not provide any justification why a replacement is needed. CWS also requests
23 \$316,268 in 2016 to purchase a new 2.5 Ton Vacuum Truck (PID 99460).

24 *i. Additional Valve Truck (PID 99419)*

25 According to CWS's response to ORA Data Request BYU-015, Question 4.b, CWS
26 requests an additional valve truck in this GRC. CWS's work paper (WP85a) describes
27 this project as a replacement; however, this vehicle is found in the list of replacement

1 vehicles on Rancho Dominguez work paper (WP8B3). Based on this information, ORA
2 considers this request as an additional vehicle request, not a replacement.

3 Lacking justification of this additional vehicle request, ORA inquired CWS to provide
4 justification for the need of this vehicle. CWS's response to ORA's Data Request BYU-
5 015, Question 4.b, provided the following justification:

6 An additional valve truck allows for more efficient use of time and resources.
7 Without a valve truck, valves must be turned manually which takes time and can
8 increase the potential for injury. The community being served is a large district
9 and there is a need for an additional valve truck.

10 From the justification provided, ORA could not verify nor agree with CWS's need for an
11 additional truck because CWS failed to provide any tangible information to substantiate
12 its claim. CWS did not provide any verifiable information on "more efficient use of time
13 and resources;" records of "injury" caused by turning valves manually; or analysis on
14 how many vacuum trucks are needed for the "large district." According to CWS's
15 response to ORA Data Request BYU-015, Question 4.a, CWS's Rancho Dominguez
16 District already has three Hydraulic Valve Trucks. ORA found CWS's request for an
17 additional valve truck is not prudent. Thus, ORA recommends that the Commission
18 disallow replacement of the hydraulic valve truck.

19 *ii. New Vacuum Truck (PID 99460)*

20 According to CWS's project justification, it provides the following on why the vacuum
21 truck is needed:

22 The vacuum truck would aid in clearing and cleaning out valve cans and vaults,
23 excavating facilities, and keeping spoils and /or discharge to a minimum.⁴⁹

⁴⁹ Dominguez Project Justification, p. DOM PJ-518.

1 CWS's project justification states that other alternatives would be hand digging or using
2 excavators.⁵⁰ CWS's project justification also states the following on why the vacuum
3 truck alternative was chosen:

4 Utilizing a vacuum truck would be the most cost effective means for conducting
5 field excavation work because it is the least intrusive to other neighboring utilities,
6 and it shortens the length of repair time. Furthermore, injuries are more likely for
7 employees when hand digging during repairs on water mains and services.⁵¹

8 Since CWS's need for a new vacuum truck is based mostly on the cost effectiveness,

9 ORA asked CWS to provide a cost benefit analysis of the new vacuum truck request.

10 CWS provided the following in response to ORA's Data Request BYU-015, Question 4.e,
11 for the cost benefit analysis:

12 Vacuum truck: National Pollutant Discharge Elimination System (NPDES)
13 regulatory requirements dictate a more efficient process to maintain compliance.
14 As prescribed by California Law Government Code 4216 -the Law requires you
15 to hand expose to the point of no conflict 24" on either side of the underground
16 facility, so you know its exact location before using power equipment. The
17 purchase of a vacuum truck will allow emergency excavation without damage to
18 unknown and un-marked facilities. The vacuum truck would aid in clearing and
19 cleaning out valve cans and vaults, excavate facilities, and keeping spoils and/or
20 discharge to a minimum.

21 CWS's above response is verbatim to CWS's project need found on page DOM PJ-518 of
22 its Dominguez Project Justification. CWS failed to provide a cost benefit analysis of a
23 project that is over \$300,000 which does not seem to include any direct benefits for the
24 ratepayers, but to make CWS's operation more convenient. CWS failed to prove that the
25 requested new vacuum truck is cost effective; therefore, ORA recommends the
26 Commission disallow the new vacuum truck request.

⁵⁰ Ibid.

⁵¹ Ibid.

1 *iii. Vehicle Maintenance Expense*

2 As it was discussed above, CWS requested 26 vehicles to be replaced in its Rancho
3 Dominguez district fleet. Also, CWS requested two additional new vehicles (valve truck
4 and vacuum truck). As previously addressed in Section 1.b, ORA's recommendations for
5 CWS's estimate for vehicles were to allow for replacing 20 vehicles and no new vehicles.
6 CWS's Rancho Dominguez work paper (WP3B3) counts these replacement vehicles in
7 cells F14, G14 and H14 for years 2016, 2017 and 2018, respectively. CWS's original
8 count was 10, 6, and 10 vehicles for each respective year above for a total of 26 vehicles.
9 After ORA's adjustment, the vehicle count for each respective year became 8, 5 and 7,
10 for a total of 20 vehicles.

11 ORA found an error on CWS's work papers (WP5B4) for Dominguez District, Hermosa
12 Redondo District, and Palos Verdes District. Line 17 of these work papers state this line
13 item is for "Additional Vehicles Requesting (Rancho Allocation)". The cells in this line,
14 J17, K17, and L17 for years 2016, 2017, and 2018, respectively, are linked to the vehicles
15 replacement count numbers discussed above. The vehicle count was for replacement
16 vehicles that would not have any effect on the vehicles expense: old vehicle being
17 replaced by new, so the vehicle count for expense remains the same. Line 13 of work
18 papers (WP5B4) for the three districts calculates (erroneously) expenses for the
19 additional vehicles based on the number of replacement vehicles. Since ORA is
20 recommending disallowance of any new vehicles that are not replacement in the Rancho
21 Dominguez district fleet, the expense for additional new vehicles on work papers
22 (WP5B4) should be zero. ORA's adjustment on the vehicle expense is discussed in
23 ORA's Report on Operating Expenses.

24 **2. Non-Specific Budgets for 2016-2018**

25 CWS requests \$329,500 in the Non-specific Budget to address unforeseen, unplanned,
26 and emergency projects and regulatory compliant projects. ORA's Report on Plant -
27 Common Issues presents its recommended total disallowance of this budget.

1 **3. 2015 Capital Budget**

2 CWS requests approximately \$360,000 for plant additions in 2015, which consist of
3 projects authorized for 2015 in the last GRC and projects authorized from previous GRCs.
4 ORA's Report on Plant - Common Issues presents its analysis and recommended 2015
5 capital additions for Rancho Dominguez.

6 **D. CONCLUSION**

7 ORA's recommendations presented above have been incorporated in the calculations for
8 estimated Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix
9 RO.

Chapter 5: Plant – East Los Angeles District

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's East Los Angeles (ELA) District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowances, adjustments, deferrals, or Advice Letter treatments where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 5-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Pipeline Replacement Program, Pumping Equipment Replacement, Vehicle Replacement, 2015 Capital Budget, and Non Specific Budget. **Table 5-B** presents ORA project-specific adjustments.

Table 5-A: Capital Budget Summary – East Los Angeles

East Los Angeles (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 7,297.3	\$ 2,260.1	\$ 2,648.1	\$ 2,785.4	\$ 3,747.7
CWS	\$ 19,914.4	\$ 5,087.7	\$ 11,769.3	\$ 15,021.4	\$ 12,948.2
CWS > ORA	\$ 12,617.1	\$ 2,827.6	\$ 9,121.2	\$ 12,236.0	\$ 9,200.5
ORA as % of CWS	37%	44%	23%	19%	31%

Table 5-B: Capital Budget Details – East Los Angeles District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	53669	Replace Interior Safety Climb - Sta. 23 Tank 1 (Res.3C)	\$ 3,385	\$ 4,045	\$ 661	84%
		Install 350' - 12" DI Main on Garfield Ave (Allston St to Whittier Blvd)				128%
		Install 300' - 12" DI Main on Whittier Blvd (Garfield Ave to Via Vista)				
	57948	Install 220' - 12" DI Main on Via Vista (Whittier Blvd to Repetto Ave)	\$ 524,601	\$ 410,196	\$ (114,405)	
		Install +/-1960ft - 6"PVC Main on Northside Dr- (Garfield Ave to Kensington Way)				148%
		Install 4 - 6" Fire Hydrants; Renew 41 -1" Services; Retire +/-1960ft of				
	58010	6" C.I Main on Northside Dr-(Garfield Ave to Kensington Way;);Retire	\$ 418,541	\$ 282,416	\$ (136,126)	
		Install +/-1960ft - 6"PVC Main on Northside Dr- (Garfield Ave to Kensington Way)				362%
		Install 4 - 6" Fire Hydrants; Renew 41 -1" Services; Retire +/-1960ft of				
	58010	6" C.I Main on Northside Dr-(Garfield Ave to Kensington Way;);Retire	\$ 145,217	\$ 40,131	\$ (105,087)	
		Install +/-1960ft - 6"PVC Main on Northside Dr- (Garfield Ave to Kensington Way)				276%
		Install 4 - 6" Fire Hydrants; Renew 41 -1" Services; Retire +/-1960ft of				
	58010	6" C.I Main on Northside Dr-(Garfield Ave to Kensington Way;);Retire	\$ 51,473	\$ 18,641	\$ (32,832)	
		Install +/- 900ft - 6" PVC Main on Fairfield Ave (Garfield Ave to Concourse Ave)				154%
	58016	Renew 25 - 1" Services; Retire +/- 900ft of 6" C.I. Main on Fairfield Ave	\$ 211,980	\$ 137,776	\$ (74,204)	
		Install +/- 900ft - 6" PVC Main on Fairfield Ave (Garfield Ave to Concourse Ave)				97%
	58016	Renew 25 - 1" Services; Retire +/- 900ft of 6" C.I. Main on Fairfield Ave	\$ 23,644	\$ 24,389	\$ 745	
		Install +/-450ft-6" PVC Main-Alma Ave (Dundas St to 962 N. Alma Ave)				175%
		Install +/-480ft-6"PVC Main -Dundas St. (Alma Ave to Hicks Ave)				
	59512	Install +/-190ft-6" PVC Main -Alma Ave (Blanchard St. to Dundas St.)	\$ 274,695	\$ 157,291	\$ (117,404)	
		Install +/-450ft-6" PVC Main-Alma Ave (Dundas St to 962 N. Alma Ave)				233%
		Install +/-480ft-6"PVC Main -Dundas St. (Alma Ave to Hicks Ave)				
	59512	Install +/-190ft-6" PVC Main -Alma Ave (Blanchard St. to Dundas St.)	\$ 77,934	\$ 33,399	\$ (44,536)	
		Install +/-450ft-6" PVC Main-Alma Ave (Dundas St to 962 N. Alma Ave)				104%
		Install +/-480ft-6"PVC Main -Dundas St. (Alma Ave to Hicks Ave)				
	59512	Install +/-190ft-6" PVC Main -Alma Ave (Blanchard St. to Dundas St.)	\$ 9,656	\$ 9,268	\$ (388)	
	59572	Field - Excavator Loader	\$ -	\$ 61,200	\$ 61,200	0%
		4 Units - Various Pump Stations				
	59733	Retire 4 Units - Various Pump Stations	\$ -	\$ 5,543	\$ 5,543	0%
	59992	1,380 ft. - 16" DI Main in Olympic Blvd from Garfield Ave to Pickering	\$ 934,114	\$ 1,056,078	\$ 121,964	88%
	60052	Paving - Sta. 23	\$ -	\$ 55,611	\$ 55,611	0%
		Paint Interior, Upgrade CP system, Replace Interior Safety Climb, Roof				144%
	61833	Vents, 30" dia. Manway, & Hatch - Sta. 58 T1 (Res. 15)	\$ 58,066	\$ 40,414	\$ (17,651)	
	61854	Upgrade CP System - Sta. 58 Tank 1 (Res. 15)	\$ 30,106	\$ 29,510	\$ (595)	102%
	61875	Replace Interior Safety Notch Carrier Rail - Sta. 42 Tank 1 (Res. 11A)	\$ 3,255	\$ 2,070	\$ (1,185)	157%
	62933	Panelboard Replacement - Sta. 32	\$ -	\$ 280,172	\$ 280,172	0%
	62952	Panelboard Replacement including RTU, SCADA, Control Panel - Sta. 23	\$ -	\$ 188,498	\$ 188,498	0%
		New 1,600' 16" D.I. Main in Olympic Blvd from Server Ave to Garfield Ave				93%
	64373		\$ 511,396	\$ 552,229	\$ 40,833	
	64735	Field - Meter Reading Equipment	\$ -	\$ 51,000	\$ 51,000	0%
	ELA0900	Meter Replacement Program	\$ -	\$ 194,434	\$ 194,434	0%
	74476	Field - Tools and Equipment - Field Yard	\$ -	\$ 15,300	\$ 15,300	0%
Specifics Total			\$ 3,278,063	\$ 3,649,610	\$ 371,547	90%
Non-Specifics Total			\$ 273,695	\$ 1,337,550	\$ 1,063,855	20%
Carry-Overs Total			\$ 3,745,571	\$14,927,267	\$11,181,695	25%
TOTAL 2015			\$ 7,297,329	\$19,914,426	\$12,617,098	37%

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98265	A/C Units - Various Treatment Facilities	\$ 5,242	\$ 5,242	\$ -	100%
	98314	Replace Vault Lids - Sta. 10	\$ 7,121	\$ 7,121	\$ -	100%
	97479	East Los Angeles CP System Upgrade -2016 - Sta.12 Tank 2, Sta.23 Tank	\$ 37,340	\$ 37,340	\$ -	100%
	97940	Replace rafters on Tank 1 and replace rafters and girder on Tank 2.	\$ 28,431	\$ 28,431	\$ -	100%
	97942	Replace wooden tank roof with a steel cone roof.	\$ -	\$ 527,560	\$ 527,560	0%
	97712	Complete pump replacement.	\$ -	\$ 104,082	\$ 104,082	0%
	98145	Replace Backwash Pump - Station 13	\$ 9,520	\$ 9,520	\$ -	100%
	98232	Replace SCADA Display Monitors - SCADA System Control Center	\$ 17,375	\$ 17,375	\$ -	100%
	98458	Install Standby generator for Operations Center	\$ 91,776	\$ 91,776	\$ -	100%
	98537	Replacement of 2 control valves in East Los Angeles. Location: Sta. 023, Hazard and Folsom.	\$ 58,532	\$ 58,532	\$ -	100%
	98177	Replace Reclaim Pump Sta #38	\$ 9,835	\$ 9,835	\$ -	100%
	106MRP16	The 2016 main replacement program will replace 8,099 feet of pipelines in the East Los Angeles district at an estimated cost of \$185 per foot.	\$ 1,678,351	\$ 2,233,743	\$ 555,392	75%
	98058	Hydrant Meter Reduced Pressure Principal Assembly	\$ 21,512	\$ 21,512	\$ -	100%
	ELA0900	Meter Replacement Program	\$ 178,929	\$ 178,929	\$ -	100%
		PURCHASE FLOW TEST AND FLUSHING EQUIPMENT				100%
	98246	PURCHASE 1- 4" FLOW TEST PIPES & PURCHASE 1- 2.5" FLOW TEST PIPES; 1 - 2 1/2" x 10' Hose; 1 - 4" x 10' Hose; Various Fittings	\$ 6,675	\$ 6,675	\$ -	100%
	98262	Purchase New Tommy Lift for 1/2 Ton Truck	\$ 5,075	\$ 5,075	\$ -	100%
	98276	Purchase Diffusers - with Dechlor capabilities Hydrant & Hitch mount	\$ 6,055	\$ 6,055	\$ -	100%
	98289	Purchase Tools and Equipment for Valve Nut Replacement/maintenance.	\$ 9,859	\$ 9,859	\$ -	100%
	98306	Purchase 1- Excavator - for field operations	\$ 72,218	\$ 72,218	\$ -	100%
	98355	Purchase Electronic Key Management System	\$ 16,227	\$ 16,227	\$ -	100%
	99131	Vehicle Replacements > 120,000 miles	\$ -	\$ 83,042	\$ 83,042	0%
Specifics Total			\$ 2,260,072	\$ 3,447,106	\$ 1,187,034	66%
Non-Specifics Total			\$ -	\$ 1,640,600	\$ 1,640,600	0%
Carry-Overs Total			\$ -	\$ -	\$ -	0%
TOTAL 2016			\$ 2,260,072	\$ 5,087,706	\$ 2,827,634	44%

1

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99131	Vehicle Replacements > 120,000 miles	\$ 41,521	\$ -	\$ (41,521)	-
	97796	Install new Panelboard(MCC) and Emergency Generator Station 12	\$ -	\$ 29,450	\$ 29,450	0%
	98267	A/C Units - Various Treatment Facilities	\$ 5,541	\$ 5,541	\$ -	100%
	98364	Install Station #13 Fencing- Fence & Gate east side of property/partition	\$ 7,757	\$ 7,757	\$ -	100%
	98387	Remove and replace existing asphalt at pump station #38.	\$ 92,582	\$ 92,582	\$ -	100%
	99374	Tubeway Improvements - Phase 2	\$ -	\$ 2,724,803	\$ 2,724,803	0%
	97509	East Los Angeles CP System Upgrade -2017 - Sta.40 Tank 1, Sta.42 Tank	\$ 38,273	\$ 38,273	\$ -	100%
	97562	Install Active Mixing System in the 500,000 Gallon Welded Steel Tank	\$ 102,263	\$ 102,263	\$ -	100%
	97848	Install Active Mixing System in the 500,000 Gallon Welded Steel Tank	\$ 102,263	\$ 102,263	\$ -	100%
	97943	Replace wooden tank roof with a steel cone roof at Sta. 012-T2.	\$ -	\$ 1,232,890	\$ 1,232,890	0%
	97978	Add inlet/outlet pipe seismic retrofits at ELA 42 T2, also add overflow pipe modifications to accommodate air gap and drain improvements.	\$ 132,110	\$ 132,110	\$ -	100%
	98107	Seismic Retrofit ELA 42 T1 Only needs Concrete Apron, 12" Overflow Pipe Modifications to accommodate air gap, catch-basin/drain	\$ 57,670	\$ 57,670	\$ -	100%
	97796	Install new Panelboard(MCC) and Emergency Generator Station 12	\$ -	\$ 396,488	\$ 396,488	0%
	99309	Install Standby generator for Customer center	\$ -	\$ 99,350	\$ 99,350	0%
	99374	Tubeway Improvements - Phase 2	\$ -	\$ 88,599	\$ 88,599	0%
	98653	Install 3168 LF of 20-inch DI to distribute well production south to the	\$ -	\$ 2,120,264	\$ 2,120,264	0%
	106MRP17	The 2017 main replacement program will replace 8,099 feet of pipelines in the East Los Angeles district at an estimated cost of \$185 per foot.	\$ 1,717,960	\$ 2,289,587	\$ 571,627	75%
	ELA0900	Meter Replacement Program	\$ 183,402	\$ 183,402	\$ -	100%
	98653	Install 3168 LF of 20-inch DI to distribute well production south to the	\$ -	\$ 35,770	\$ 35,770	0%
	98185	Replace Copier MPC4500 with Multi-Function Network Copier/Scanner - ELA CSC	\$ 8,000	\$ 28,458	\$ 20,458	28%
	98212	Replace Copier MPC3500 with Multi-Function Network Copier/Scanner - ELA Operations	\$ 7,000	\$ 28,458	\$ 21,458	25%
	98329	Replace Copier MP 4002 with Multi-Function Network Copier/Scanner	\$ 4,300	\$ 13,244	\$ 8,944	32%
	98360	Purchase Pipe Inspection Camera System	\$ 10,170	\$ 10,170	\$ -	100%
	99133	Vehicle Replacements > 120,000 miles	\$ 85,118	\$ 127,676	\$ 42,558	67%
	99374	Tubeway Improvements - Phase 2	\$ -	\$ 90,755	\$ 90,755	0%
	99409	Additional utility vehicle - 0.75 ton pickup with lift gate	\$ 52,190	\$ 52,190	\$ -	100%
Specifics Total			\$ 2,648,122	\$10,090,016	\$ 7,441,894	26%
Non-Specifics Total			\$ -	\$ 1,679,300	\$ 1,679,300	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2017			\$ 2,648,122	\$11,769,316	\$ 9,121,194	23%

1

1

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98268	A/C Units - Various Treatment Facilities	\$ 5,837	\$ 5,837	\$ -	100%
	98410	Slurry seal over existing asphalt at pump station #10.	\$ 11,333	\$ 11,333	\$ -	100%
	98413	Install lighting and security cameras at station #42 for security and safety	\$ 64,789	\$ 64,789	\$ -	100%
	98416	Slurry seal over existing asphalt at pump station #42.	\$ 11,535	\$ 11,535	\$ -	100%
	98418	Off-site improvements to consolidate hill side and prevent run-off/erosion	\$ 89,841	\$ 89,841	\$ -	100%
	98667	Wells 62-01/02 Equip Wells and Treatment System for Ammonia, Sulfide and Methane Removal. (4000 GPM)	\$ -	\$ 842,606	\$ 842,606	0%
	98671	Install pumping capacity from Sta 16 at Sta 42 - panelboard, booster pump station, and site work	\$ -	\$ 216,605	\$ 216,605	0%
	97510	East Los Angeles CP System Upgrade -2018 - Sta.60 Tank 1	\$ 19,615	\$ 19,615	\$ -	100%
	97850	Install Active Mixing System in the 500,000 Gallon Welded Steel Tank	\$ 104,820	\$ 104,820	\$ -	100%
	97851	Install Active Mixing System in the 250,000 Gallon Welded Steel Tank	\$ 104,820	\$ 104,820	\$ -	100%
	97908	Seismic Retrofit ELA 23 T1 for 260k tank with 10-inch common inlet/outlet for Zone G and 8-inch common inlet/outlet for Zone D. Install	\$ 159,320	\$ 159,320	\$ -	100%
	98181	10" Inlet/Outlet Pipe Seismic Retrofits, 6" Overflow Pipe Modifications to accommodate air gap, drain improvements and site paving. Flush Clean-out	\$ 98,424	\$ 98,424	\$ -	100%
	98667	Wells 62-01/02 Equip Wells and Treatment System for Ammonia, Sulfide and Methane Removal. (4000 GPM)	\$ -	\$ 599,624	\$ 599,624	0%
	97795	Complete Pump Replacement	\$ 55,270	\$ 55,270	\$ -	100%
	98115	Complete pump replacement.	\$ 65,072	\$ 65,072	\$ -	100%
	98534	Replacement of 1 control valve in East Los Angeles. Location: 106_000_CV001	\$ -	\$ 30,748	\$ 30,748	0%
	98667	Wells 62-01/02 Equip Wells and Treatment System for Ammonia, Sulfide and Methane Removal. (4000 GPM)	\$ -	\$ 1,657,114	\$ 1,657,114	0%
	98671	Install pumping capacity from Sta 16 at Sta 42 - panelboard, booster pump station, and site work	\$ -	\$ 1,476,427	\$ 1,476,427	0%
	98403	Chemical Feed Pumps- Various Stations	\$ 5,958	\$ 5,958	\$ -	100%
	98667	Wells 62-01/02 Equip Wells and Treatment System for Ammonia, Sulfide and Methane Removal. (4000 GPM)	\$ -	\$ 2,857,237	\$ 2,857,237	0%
	98662	Install 3168 LF of 20-inch DI to distribute well production south to the	\$ -	\$ 2,119,389	\$ 2,119,389	0%
	106MRP18	The 2018 main replacement program will replace 8,099 feet of pipelines in the East Los Angeles district at an estimated cost of \$185 per foot.	\$ 1,757,130	\$ 2,346,826	\$ 589,696	75%
	ELA0900	Meter Replacement Program	\$ 187,988	\$ 187,988	\$ -	100%
	98662	Install 3168 LF of 20-inch DI to distribute well production south to the	\$ -	\$ 36,665	\$ 36,665	0%
	99134	Vehicle Replacements > 120,000 miles	\$ 43,623	\$ 118,240	\$ 74,617	37%
Specifics Total			\$ 2,785,375	\$13,286,103	\$10,500,728	21%
Non-Specifics Total			\$ -	\$ 1,735,300	\$ 1,735,300	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2018			\$ 2,785,375	\$15,021,403	\$12,236,028	19%

2

C. DISCUSSION

The ELA District recorded \$5,528 in annual average gross plant additions for the most recent six-year period 2009-2014.⁵² **Table 5-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

Table 5-C: Capital Budget Proposals vs. Recorded Expenditures– East Los Angeles District

East Los Angeles (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 5,528.0	100%
ORA	\$ 7,297.3	\$ 2,260.1	\$ 2,648.1	\$ 2,785.4	\$ 3,747.7	68%
CWS	\$ 19,914.4	\$ 5,087.7	\$ 11,769.3	\$ 15,021.4	\$ 12,948.2	234%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific Budgets (Section 2), and 2015 Capital Budget (Section 3) below.

1. Specific Projects

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Pipeline Replacement Program (PIDs 99339, 99342, & 99344)

CWS requests \$2,233,743 in 2016, \$2,289,587 in 2017 and \$2,346,826 in 2018 for pipeline replacement in ELA District. CWS proposes to replace 8,099 feet per year. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each

⁵² Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 5-D** below shows ORA's recommendations for pipeline replacement and the associated budgets in this district.

Table 5-D: Pipeline Replacement Program Budget – East Los Angeles District

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099339	6,934	\$ 1,678,351	8,099	\$ 2,233,743
2017	00099342	6,934	\$ 1,717,960	8,099	\$ 2,289,587
2018	00099344	6,934	\$ 1,757,130	8,099	\$ 2,346,826

b. Pumping Equipment Replacement (PID 97712)

CWS requests a specific budget for replacing its pumps and motors according to its pumping equipment replacement program which is based on hydraulic pump efficiency results, pump annual run hours, pump age in terms of remaining life, and asset criticality.⁵³ CWS requests \$104,082 in 2016 to replace a 100-hp pump and motor located at ELA 054-01. According to CWS's ELA Project Justification and its response to ORA Data Request BYU-002, Pump Ranking Score for the ELA 054-01 was 90 with efficiency rating of 61.6%. CWS's ELA Project Justification page ELA PJ-218 states that CWS selects pump replacement candidates when the Pump Ranking Score is between 105 and 140.⁵⁴ According to CWS's response to ORA Data Request BYU-002, none of the ELA pumps scored higher than 100. ORA found ELA 054-01 does not meet CWS's pump replacement criteria.

⁵³ East Los Angeles Project Justifications, page ELA PJ – 216.

⁵⁴ CWS East Los Angeles Project Justification, pp. ELA PJ-216 to 219 provides the description of Pump Evaluation Criteria that reviews hydraulic pump efficiency test results, pump annual run hours, pump age in terms of remaining life, and asset criticality.

1 Additionally, CWS's ELA Project Justification states:

2 ...loss of this pump would result in low system pressure or require CWS to
3 purchase more water from Central Basin Municipal Water District.⁵⁵

4 ORA found that CWS already has a backup plan (purchased water from Central Basin)
5 when ELA 054-01 needs to be taken out of service for any reason. ORA determined it is
6 not prudent to replace ELA 054-01 at this time. ORA's recommendation for pump and
7 motor replacement is also discussed in its Report in Plant – Common Issues. Therefore,
8 ORA recommends the Commission disallow CWS's request as the requested replacement
9 does not meet its own pump replacement criteria.

10 *c. Control Valve Replacements (PIDs 98534 & 98537)*

11 CWS requests a total of \$98,280 (PID 98537 for two valves in 2016 and PID 98534 for
12 one valve in 2018) to replace three control valves in this district. As presented in ORA's
13 Report on Plant – Common Issues, ORA makes the following recommendations to the
14 Commission:

- 15 • Allow PID 98537 as requested - \$58,532 in 2016,
- 16 • Disallow PID 98534 - \$0 in 2018.

17 *d. Panelboard and Generator Replacement (PID 97796)*

18 CWS requests \$425,939 in 2017 to replace the electrical panel and the stationary
19 generator located at Station 12 due to the age and increasing maintenance cost.

20 *i. Panelboard Replacement*

21 CWS lists the following for the justification to replace the panelboard:

⁵⁵ CWS East Los Angeles Project Justifications, p. ELA PJ – 218.

- 1 • Age: panelboard was installed in 1959
- 2 • Panelboard enclosure has rust damages
- 3 • Breakers on the panel have poor operation during summer
- 4 • Several components are difficult to repair due to age and parts availability
- 5 • Temporarily added components increased electrical shock hazard
- 6 • The current panel does not have enough room to accommodate additional VFD
- 7 control

8 Age of the panelboard cannot be of a significant reason for replacement since it can be
9 repaired or reconditioned to extend its life. Also, the panelboard does not cease operation
10 after its life expectancy. As long as the panelboard is operational, it is still useful.
11 CWS's project justification and its response to ORA Data Request BYU-002 repeatedly
12 referenced the rust damage. During the site visit, ORA noticed some rusty spots on the
13 enclosure, but did not notice it was severe enough to threaten the structural integrity of
14 the enclosure. Below is a picture of the "rust damage" included in CWS's ELA Project
15 Justification. There is presence of rust on the bottom of the panel, but it is not severe
16 enough to threaten the structural integrity: the panel maintains its shape and does not
17 show any holes.

Figure 5-A: Picture of “Rust Damage” ⁵⁶

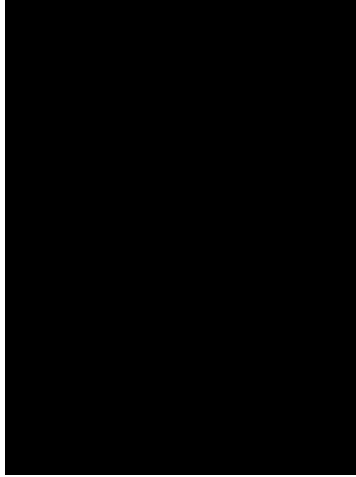


Also, CWS’s response to ORA Data Request BYU-002 discussed CWS employees’ difficulties in accessing the panel when it needs to service the hydraulic equipment and cathodic protection system installed in the panel. CWS elected to install these systems inside the panel. Therefore, CWS justification is irrelevant as a condition to replace the entire panel. Also, below is a picture included in the ELA Project Justification which shows cathodic protection system (upper) and hydraulic equipment (lower) in plain view inside the panel. ORA did not find any accessibility issue for these components located inside the panel.

⁵⁶ CWS East Los Angeles Project Justifications, p ELA PJ 229.

1 **Figure 5-B: Cathodic Protection System and Hydraulic Equipment Installed in the**
2 **Panel** ⁵⁷

3 ***BEGIN CONFIDENTIAL***



5 *** END CONFIDENTIAL ***

6 When asked about CWS's hardship in obtaining parts for repair, CWS provided only one
7 case in its response to ORA Data Request BYU-002 that in February 2015, CWS could
8 not purchase the "Cutler Hammer Starter" (without any further description) for
9 replacement and had to buy a used part to make the repair. Furthermore, the purchase of
10 a used part does not validate CWS's claim of hardship. CWS did not provide any other
11 case to support its claim of "several" components are difficult to repair due to parts
12 availability. CWS did not provide any other cases to show its hardship of obtaining parts
13 to make repairs. ORA determined CWS has been able to maintain the panel with no
14 issues with parts availability.

⁵⁷ CWS East Los Angeles Project Justifications, p ELA PJ 228.

1 CWS states a VFD was added “temporarily” to control Booster A.⁵⁸ ELA project
2 justification states the component added to the panelboard that is not wired for permanent
3 use (temporarily added) will increase the electrical shock hazard.⁵⁹ Thus, the claimed
4 “electrical shock hazard” was created by CWS, not by the design of the existing panel. If
5 the “temporary” VFD for Booster A truly created the claimed electrical shock hazard, it
6 should have been noted in the electrical inspections as a code violation. However,
7 CWS’s response to ORA Data Request BYU-008, page 4, states the electrical panel at
8 ELA Station 12 has “no violations noted.”

9 CWS argues that there is no room for an additional VFD in the panel which warrants
10 panel replacement. CWS’s response to ORA Data Request BYU-002, Question 2.f,
11 states that the addition of VFD (for Booster C control) was being done as a part of the
12 tank replacement project (PID 20670) that was approved in the 2012 GRC. However, the
13 response also states the following:

14 The VFD install was not initially in the project justification and it has been added
15 to the project in design phase.

16 Installation of an additional VFD (for Booster C) was not requested and not authorized.
17 Also, installation of an additional VFD is not being requesting in this GRC either.
18 Requesting a whole panel replacement to install an unauthorized VFD is not reasonable.

19 *ii. Generator Replacement*

20 CWS lists the following for the justification to replace the existing generator:

- 21 • Age: the existing generator was installed in 1991
22 • Maintenance cost increasing due to scarcity of available parts

⁵⁸ CWS response to ORA Data Request BYU-002, Question 2.c.

⁵⁹ CWS East Los Angeles Project Justification, p. ELA PJ-222.

- 1 • A new generator is needed for reliability
- 2 • Replacing the generator along with the panelboard will save cost

3 Regardless of the age of the existing generator, as long as it is still serviceable and
4 operational, it is still useful. When asked to show the maintenance cost is increasing due
5 to the lack of available parts, CWS just provided past instances (without any verifiable
6 evidence) that the generator required repair:⁶⁰

- 7 • July 2007, the generator failed to start due to battery issue – ORA could not agree
8 with CWS that a battery issue of a generator would support a generator
9 replacement.
- 10 • January 2008, starting issue with the generator – without further information
11 provided, ORA considers the issue had been addressed since CWS states in the
12 same response that the existing generator is currently operational.
- 13 • June 2009 and June 2010, Auxiliary Power System had to be repaired – again,
14 without further information, ORA considers the issue had been addressed.
- 15 • August 2015, generator failure – again, ORA considers the issue had been
16 addressed.

17 The above list of generator failure/issues was not substantiated by any verifiable records.
18 However, CWS provided the following maintenance records for the ELA Station 12
19 generator:⁶¹

⁶⁰ CWS response to ORA Data Request BYU-002, Question 2.h.

⁶¹ CWS response to ORA Data Request SN2-016, Question 1.c.

1

Table 5-E: ELA Station 12 Generator Maintenance Records

Date	Contractor	Description	Amount	Note
4/27/2005	Power Services, Inc.	Preventive Maintenance	N/A	
12/12/2006	Cummins Cal Pacific	Preventive Maintenance	N/A	
11/6/2007	Advanced Generator Service	Generator Repair	\$520	
11/9/2007	Advanced Generator Repair	Automatic Transfer Switch (ATS) Repair	\$999	ATS problem identified during generator repair
6/22/2009	United Power Generation	Preventive Maintenance	\$668	
9/10/2009	United Power Generation	Generator – Replace Water Hose ATS – Replace ATS Indicator	\$410	Includes ATS related repair cost
8/12/2010	United Power Generation	Generator – Replace Fuel Line (25 feet of 3/8-inch line)	N/A	
10/4/2011	United Power Generation	Generator – Valve cover gasket, Bypass Hose and Clamps	\$936.21	
10/17/2012	United Power Generation	Preventive Maintenance	N/A	
10/8/2013	United Power Generation	Preventive Maintenance	\$668	
10/1/2014	United Power Generation	Preventive Maintenance	\$668	Other testing and analysis \$1,000 additional
10 Years Total:			\$7,873.21	* PM cost assumed to be \$688. * Testing and analysis of \$1,000 added.

2 As the maintenance records indicate, most of the services on the generator in the past
3 were preventive maintenance. Also, all of the generator repairs were minor in nature that
4 is under \$1,000 repair cost. Total expenditures from 2004 through 2014 were \$7,873.
5 CWS failed to prove that the maintenance cost for the generator is increasing due to
6 scarcity of available parts. CWS also did not prove the existing generator is not reliable.

1 CWS stated the generator is currently operational⁶² and the maintenance records show it
2 only performed preventive maintenance in the last 3 years.

3 For the reasons discussed above, ORA recommends that the Commission disallow
4 CWS's request to replace panelboard and generator at Station 12.

5 *e. ELA 061-T1 and ELA 012-T2 Replace Roof (PIDs 97942 and 97943)*

6 CWS requests \$527,560 in 2016 (PID 97942) and \$1,232,890 in 2017 (PID 97943) to
7 replace wooden structured roofs on its tanks with steel structure. ELA 061-T1 is 500,000
8 gallons capacity and ELA 012-T2 is 1 million gallons capacity.

9 CWS states in the project justification that the current roof does not meet current AWWA
10 standards, which are recommended for new tank construction. The standards cannot be
11 applied retroactively as the newer requirements are for new constructions, and not for
12 existing structures. CWS does not necessarily need to use the "new" standards as the
13 justification for the replacement of the roof. ORA believes that the replacement needs
14 should be based on the condition of the existing roofs.

15 CWS's project justification states that "the existing roof and support structures are
16 beginning to deteriorate. If the roofs or support structures were to fail, the tanks would
17 have to remain out of service until a new roof could be designed and constructed." When
18 asked to provide the evidence that the existing wooden structure is failing, CWS stated in
19 its response to ORA Data Request BYU-002 that it did not perform structural analysis on
20 the wooden structure.⁶³ Instead CWS refers to AWWA standards and discusses how the
21 existing roofs are not in compliance. CWS is claiming the possible failure of the existing

⁶² CWS response to ORA Data Request BYU-002, Question 5.g.

⁶³ CWS response to ORA Data Request BYU-002, Question 3.a.

1 wooden roof without performing a structural analysis. Again, referring to a construction
2 standard is irrelevant to assessing the current condition of the roofs especially when the
3 existing configuration of the tanks (steel tank with wooden roof) is a grandfathered in
4 conditions.

5 ORA also questioned CWS in ORA Data Request BYU-002 if it has a preliminary design
6 for the replacement roof. CWS responded that the design will be done by a consultant in
7 the future. Also, the same response state that “as part of the design phase, evaluation of
8 the steel roof type will be performed to determine the lowest life-cycle cost.”

9 Additionally, CWS’s project justification provides evidence that aluminum or stainless
10 steel structures are also being considered.⁶⁴ During ORA’s site visit, CWS’s engineering
11 staff stated that this is not a typical construction and it requires many considerations to
12 come up with the right design. Given the uncertainties in design discussed above, ORA
13 is skeptical about CWS’s project cost estimate. Even though CWS states the cost
14 estimate does not anticipate any significant changes, ORA witnessed numerous examples
15 of CWS’s inaccurate project cost estimates in previous GRCs. CWS’s requests for Cost
16 Overrun recovery summaries included in its Results of Operations (“RO”) Reports are
17 examples of CWS’s inability to correctly estimate project cost. Not to mention that this
18 project’s cost estimate was not based on any specific design.

19 CWS must be required to provide the Commission with convincing evidence that the
20 existing wooden roof structure will soon not be able to perform its designed function.
21 Also, CWS must be required to justify the construction cost estimate based on a specific
22 design. Until then, ORA recommends that the Commission disallow CWS’s request to
23 replace the roofs of the tanks.

⁶⁴ CWS East Los Angeles Project Justification, p. ELA PJ-239.

1 *f. Install 20” DI to Distribute Groundwater (PID 98653 and 98662)*

2 CWS requests \$2,156,035 in 2017 (Phase I, PID 98653) and \$2,156,054 in 2018 (Phase
3 II, PID 98662) to construct a 20-inch transmission main to move water from south of
4 Zone D to the north of it. CWS states in its project justification that this main is needed
5 to move water from the well either constructed or being constructed in the southern area
6 of Zone D. The project justification further explains that before the construction of these
7 wells, Zone D received water from a purchased water connection in the northern area of
8 Zone D and the existing water mains on the southern area of Zone D is not suitable for
9 transmitting water to the north.

10 According to CWS’s project justification, this transmission pipeline is necessary to move
11 water from the wells in Zone D. However, the project justification also states that only
12 one well out of four wells is identified as in service: Carob 63-01 Well. Tubeway 62-01
13 was drilled, but due to contamination issues, it has not been equipped since the treatment
14 method is still being evaluated. According to the project justification, the other two
15 wells, Tubeway 62-02 and Carob 63-02 are at “planned” (62-02) and “potential future”
16 (63-02) stages. A transmission pipeline from Carob 63-01 well is already constructed.
17 ORA verified it by drive-by inspection during its site visit. The Tubeway Wells are not
18 constructed, thus, the requested transmission pipeline will not be needed since there
19 won’t be any water to transmit.

20 As discussed below, ORA is not recommending Tubeway Wells, therefore, the proposed
21 pipeline to receive water from the Tubeway wells are not necessary. Therefore, the
22 requested 20-inch pipeline is not needed at this time. ORA recommends the Commission
23 disallow the requested pipeline projects.

24 *g. Wells 62-01/02 Equip Wells and Treatment System (PID 98667)*

25 CWS requests \$5,956,580 in 2018 to add treatment to wells 62-01 and 62-02. According
26 to CWS’s project justification, construction of these wells was authorized as Advice
27 Letter projects in the 2012 GRC. At that time, the treatment was not included in the
28 project scope. CWS states in its response to ORA Data Request BYU-002 that the test

1 drilling and pumping results did not present high level of contaminants. However,
2 according to ELA Project Justification, water from Well 62-01 contained high level of
3 Ammonia, Sulfide, and Methane after optimizing the pump setting and well output.
4 According to the project justification, CWS proposes Catalytic Granulated Activated
5 Carbon (“GAC”) to remove Sulfide, Chlorine to treat residual Sulfide and Ammonia
6 oxidation, Splash Plates (aeration) to remove Methane, and secondary disinfection to
7 treat Ammonia.

8 According to CWS’s cost benefit analysis (revenue requirement comparison between the
9 purchased water and the proposed Tubeway wells with treatment) provided in its
10 response to ORA Data Request BYU-002, CWS reports the first year revenue
11 requirement for the project is \$5,463,148 and CWS analyzed that it is lower than the
12 purchased water cost of \$6,170,000 for the first year.⁶⁵

13 *i. CWS’s analysis does not capture the whole scope of revenue requirement*
14 *impact*

15 When analyzing for the revenue requirement for the requested project (PID 98667), CWS
16 only accounted for the property, wells, treatment, and building improvement as a basis
17 for the plant total (total of \$16.2 million). ORA found that the 20-inch DI transmission
18 pipeline project request above (PIDs 98653 and 98662) was based on CWS’s need to
19 transfer water from these Tubeway wells to the north of Zone D. This transmission
20 pipeline cost (total of \$4,312,089) should be included in the total scope of the project to
21 properly account for the revenue impact. Also, CWS assumes only \$700,000 for the
22 building improvement. According to 2012 GRC Settlement document, the Tubeway
23 Building Improvement Phase 1 (PID 57791) was \$1,235,313. Additionally, the exact

⁶⁵ CWS’s response to ORA Data Request BYU-002, Question 4.c. CWS estimates the total Capital Cost of the Tubeway Wells (62-01 & 62-02) with Treatment to be \$16,200,000.

1 cost requested for the property (PID 50350) was \$6,822,677 instead of \$6,800,000; the
2 exact cost requested for the Wells (PIDs 18197 & 20583) was \$3,758,731 instead of
3 \$3,400,000; and the treatment (PID 98667) was requested for \$5,959,580 instead of
4 \$5,300,000. Comparison of the project cost differences and corresponding revenue
5 requirement is presented in the **Table 5-F** below. Moreover, according to CWS's
6 Purchase Commitment with the Central Basin MWD, CWS has to pay Central Basin
7 MWD for the difference of Purchase Commitment and actual purchase.⁶⁶ The rate
8 applicable for this payment is Tier 1 Supply Rate which is currently \$158 per acre foot.⁶⁷
9 If Tubeway wells were built and produce ground water, CWS has to reduce the purchased
10 water amount. That is the main basis of CWS requesting the Tubeway wells and
11 treatment. Thus, the payment to Central Basin should also be considered in the project
12 scope to calculate the revenue requirement.

13 According to CWS's purchase agreement with Central Basin MWD, the Purchase
14 Commitment is 58,599 AF for 5 years. That is 11,720 AF per year or 3,820 million
15 gallons ("MG") per year. CWS's East Los Angeles District purchased 3,384 MG in 2014
16 from Central Basin MWD⁶⁸. That is 436 MG less than the Purchase Agreement. So, if
17 CWS produces more groundwater, CWS would have to purchase less and the purchased
18 amount would move further away from the Purchase Commitment. Since CWS estimates
19 5,810 AF of annual groundwater production from the Tubeway wells⁶⁹, payment to
20 Central Basin MWD in the amount of \$917,980 (=5,810 AF X \$158 per AF) should be
21 accounted for not meeting the Purchase Commitment. For comparison, ORA adjusted

⁶⁶ ELA Urban Water Management Plan, Attachment I.

⁶⁷ Central Basin Municipal Water District FY 2014-15 Water Rates and Charges.

⁶⁸ CWS response to ORA Data Request BYU-009, Question 1.

⁶⁹ CWS response to ORA Data Request BYU-002, Question 4.c.

CWS's request by adding the above mentioned projects and Central Basin charges. A comparison of CWS's analysis of revenue impact by the requested projects and ORA's adjusted revenue impact is presented below.

Table 5-F: Comparison of Revenue Impact by the Tubeway Wells with Treatment

Items Included	Project Request		Note for Adjusted
	CWS Request	Adjusted	
Property	\$ 6,800,000	\$ 6,822,667	PID 50350
Wells	\$ 3,400,000	\$ 3,758,731	PID 18197 & 20583
Treatment	\$ 5,300,000	\$ 5,956,580	PID 98667
Building Improve.	\$ 700,000	\$ 1,235,313	PID 57791
Trans. Pipeline		\$ 4,312,089	PID 98653 & 98662
Plant Total	\$ 16,200,000	\$ 22,085,380	
Pumping cost	\$ 3,532,480	\$ 3,532,480	
Property Tax	\$ 194,400	\$ 265,025	
Plant Rev. Req.	\$ 1,736,478	\$ 2,367,332	
Central Basin Charge		\$ 917,980	Per purchase commitment
Resulting 1st Year Revenue Requirement	\$ 5,463,358	\$ 7,082,816	

When CWS analyzed revenue impact of the requested projects, it assumed 90% of pump run time. Thus, in CWS's analysis, the purchased water cost was based on the annual pumping estimate of 5,810 AF which resulted in \$6,170,220 for the cost of purchased water. According to CWS's response to ORA Data Request BYU-009, Question 4.c, CWS has been pumping groundwater approximately 1,800 MG per year between 2012 and 2014. According to CWS's ELA Urban Water Management Plan, the ELA district has a capacity to produce 6,230 gpm or 8.97 MG per day.⁷⁰ That is 3,274 MG per year (8.97 MG per day x 365 days). Comparing ELA district's capacity of 3,274 MG with the district's annual production of 1,800 MG, ORA found ELA district has been producing groundwater at 55% of the capacity. Thus, ORA used 55% as a basis for estimating the

⁷⁰ CWS Urban Water Management Plan East Los Angeles, p. 48.

purchased water cost which resulted in \$3,770,690.⁷¹ **Table 5-G** below presents a comparison of cost benefit between the purchased water and the requested projects.

Table 5-G: Comparison of Cost Benefit between Purchase and Treatment

Purchase vs. Treatment			
	Revenue Req.	Purchase Cost (@55% pump run)	CWS > Purchase
CWS Request	\$ 5,463,358	\$ 3,770,690	\$ 1,692,668
Adjusted	\$ 7,082,816	\$ 3,770,690	\$ 3,312,126
Rate of Return	7.94%		
Property Tax	1.20%		
NTG Multiplier	1.35		
Purchase Water	\$ 1,062	per AF	
Well Prod.	4,000	gpm	
Pumping Cost	\$ 608	per AF	
Annual Pumping (AF)			
90%	5810	\$ 6,170,220	
75%	4842	\$ 5,141,850	
55%	3551	\$ 3,770,690	
CB Charge	\$ 158	per AF	Tier 1 Supply Rate

As it is presented in the above **Table 5-G**, considering the revenue impact by the full scope of the Tubeway wells with treatment, the requested projects (Tubeway wells, treatment, and transmission pipelines) are not cost beneficial to purchasing water. For the reasons discussed above, ORA recommends that the Commission disallow CWS's request for Tubeway wells and treatment.

h. Retire Station 16 and Install Assets at Station 42 (PID 98671 and 97577)

CWS requests \$1,693,032 in 2018 (PID 68671) to install a pump house with pumps, panelboard and control valves at Station 42 to relocate the capacity of Station 16. CWS proposes to "retire" Station 16 equipment (PID 97577). (This PID is not shown in the

⁷¹ 3550.556 AF x \$1,062 per AF = \$3,770,690.

1 work paper possibly it is reserved for the future request.) Station 16 has two pumps (total
2 capacity of 800 gpm), a panelboard, and an antenna.⁷²

3 According to the project justification, Station 16 serves as a “backup” for Station 59 with
4 a total pumping capacity of 1,500 gpm. The project justification gives the following for
5 the need of this project:

- 6 • Station 16 is “inconvenient” for CWS’s operators to work. The small size of the
7 station limits access of maintenance vehicle and the operators have to park their
8 vehicles along the street.
- 9 • Station 16 and its equipment are old and soon to be replaced based on its age.
- 10 • Station 16 had no major vandalism in the past, but security is a major issue
11 because it is open to the street.

12 According to CWS’s response to ORA Data Request BYU-002, the following is Station
13 16’s pump run hours from 2000 to 2010.

14 **Table 5-H: ELA Station 16 – Pump Run Hours**

Pump	HP	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Avg.
16-B	15	0	0	0	0	0	0	102	0	0	202	0	27.6
16-C	20	0	1	1	30	10	3	14	0	102	1	0	14.7

15 As it is shown on the above table, Station 16 does not need to be in service often. The
16 same data request response reports zero hours for 2010 and 2011. According to CWS’s
17 response to the Minimum Data Request (“MDR”), MDR E.8, the two pumps at Station

⁷² CWS ELA Project Justification, p. ELA PJ-330.

1 16 are in active status. ORA determined the need for Station 16 pumps' capacity has
2 been minimal since it only serves as backup for the pumps at Station 59. For such low
3 operating hours, Station 16's capacity should not be moved to Station 42 just for the
4 convenience of CWS's operation. Also, contrary to CWS's claim in its project
5 justification that a security is a concern, Station 16 is fully fenced with chain link fence to
6 limit public access to the site. Also, chain link fence makes Station 16 visible to the
7 public which would also deter anyone from getting into the station and conducting illegal
8 activities.

9 ORA recommends that the Commission disallow CWS's request.

10 *i. Tubeway Phase 2 – Improvements (PID 99374)*

11 CWS requests \$2,904,157 in 2017 to make improvements at the Tubeway facility. CWS
12 acquired the Tubeway facility in the previous GRC and it now houses CWS's customer
13 service center and warehouse space. In the "Phase 2"⁷³ of the Tubeway improvement,
14 CWS proposes to relocate its Operations Center from the Sheila property where the
15 Operations Center is currently located. The project justification states the Sheila property
16 buildings show visible stress to the structure, does not meet ADA compliance, and has
17 not been retrofitted for earthquakes. Therefore, it must relocate the Operations Center to
18 the Tubeway Facility.

19 When ORA asked CWS to provide evidence that the existing buildings at Sheila property
20 show "stress" to the structure, CWS only provided pictures of cracked floor tiles (not
21 peeling, just showing cracks underneath the coating) and thin crack lines on outside
22 stucco wall. ORA could not determine the validity of this claim other than the existence

⁷³ CWS uses Phase 2 thus it sounds like this was preplanned. However, this is just a wording that CWS chose to use. Phase 2 was never in any project scope when CWS proposed to acquire the Tubeway facility.

1 of “cosmetic” damages to the building because CWS did not provide any structural
2 analysis.

3 According to the project justification, the Operations Center buildings are modified
4 mobile home types. And CWS could not provide any evidence to ORA that these types
5 of buildings need to be seismically retrofitted to be in compliance with the building code.
6 ORA is also skeptical about how CWS was able to occupy the Sheila property after all
7 these years if the seismic retrofit is an issue.

8 Additionally, when asked about the ADA compliance, CWS could not provide any
9 evidence to show the ADA compliance is even an issue.⁷⁴ CWS stated it was never cited
10 for ADA incompliance.⁷⁵ Should ADA compliance be an issue, ORA believes CWS
11 could not have obtained a building occupancy permit when it moved into the Sheila
12 facility. Also, during ORA’s site visit, ORA confirmed the Sheila property had ADA
13 ramps to the entrance of the building and the restrooms were fitted with railings.

14 Additionally, CWS could not provide convincing evidence to show the “cracks” on the
15 building would make the building “uninhabitable.” CWS was speculating the building
16 might have an issue with the foundation⁷⁶ without providing any verifiable information or
17 inspections performed by a structural engineer to substantiate its claim.

18 ORA finds CWS’s request to relocate its Operation Center (a \$2,900,000 project) lacks
19 justification and recommends that the Commission disallow CWS’s request.

⁷⁴ CWS response to ORA Data Request BYU-002, Question 6.e.

⁷⁵ CWS response to ORA Data Request BYU-002, Question 6.e.

⁷⁶ CWS response to ORA Data Request BYU-002, Question 6.d.

j. Various Copier Replacements

CWS requests replacing three copiers in 2017. ORA found CWS's requested budget for the copiers to be outrageous. CWS's requested amount and ORA's recommended amounts are presented in the **Table 5-I** below.

Table 5-I: ORA Recommended Budget for Copiers

Project #	Project Description	ORA	CWS
98185	Replace Copier MPC4500 with Multi-Function Network Copier/Scanner - ELA CSC	\$ 8,000	\$ 28,458
98212	Replace Copier MPC3500 with Multi-Function Network Copier/Scanner - ELA	\$ 7,000	\$ 28,458
98329	Replace Copier MP 4002 with Multi-Function Network Copier/Scanner	\$ 4,300	\$ 13,244




ORA found the latest models replacing the requested copiers are as follows: MP C4503, MP C3503, and MP 4002.⁷⁷ ORA's internet price search found the following prices for the above copier models⁷⁸ in **Table 5-J**:

⁷⁷ www.ricoh-usa.com/products.aspx

⁷⁸ <http://copyfaxes.com/category/18/Ricoh-Copiers>

1

Table 5-J: ORA's Findings on Copier Prices

	 Ricoh Aficio MP C4503 Multifunction Color Copier	 Ricoh Aficio MP C4503 Multifunction Color Copier	 Ricoh Aficio MP 1802 Multifunction Copier
Color/B&W	Color	Color	Black and White
Purpose	Mid-Sized Workgroup/Large Workgroup	Small Workgroup/Mid-Sized Workgroup	Mid-Sized Workgroup/Large Workgroup
Speed	<25	25	30
Volume	14,000	12,000	15,000
Print	Yes	Yes	Yes
Copy	Yes	Yes	Yes
Scan	Yes	Yes	Yes
Fax	Yes	Yes	Yes
Price	\$7,781.00	\$5,781.00	\$4,290.00

2

3 ORA recommends the Commission adopt ORA's budget for the copier replacement.

4 ***k. Vehicle Replacements (PIDs 99131, 99133 & 99134)***

5 CWS requests \$83,042 in 2016, \$127,677 in 2017 and \$118,241 in 2018 to replace
 6 vehicles in the East Los Angeles district. For the reasons presented in ORA's Report on
 7 Plant – Common Issues, ORA recommends the following vehicle replacements .

Table 5-K: Vehicle Replacements – East Los Angeles

Proposed Year	Project ID	Vehicle ID	CWS Request	ORA Recommendation	ORA Explanation
2016	99131	V206053	\$ 41,521	\$ 41,521	postpone to 2017
2016	99131	V212008	\$ 41,521	-	defer to next GRC
2017	99133	V208017	\$ 42,559	\$ 42,559	Allowed
2017	99133	V211039	\$ 42,559	-	defer to next GRC
2017	99133	V213020	\$ 42,559	\$ 42,559	Allowed
2018	99134	V208067	\$ 43,623	\$ 43,623	Allowed
2018	99134	V209021	\$ 74,618	-	defer to next GRC
Total:			\$ 328,958	\$ 170,261	

9

2. Non-Specific Budgets for 2016-2018

CWS requests \$5,055,200 in the Non-specific Budget to address unforeseen, unplanned, and emergency projects and regulatory compliant projects. ORA's Report on Plant - Common Issues presents its recommended total disallowance of this budget.

3. 2015 Capital Budget

CWS requests approximately \$20 million for plant additions in 2015, which consist of projects authorized for 2015 in the last GRC and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents its analysis and basis for adjusting 2015 capital additions for East Los Angeles.

D. CONCLUSION

ORA's recommendations presented above have been incorporated in the calculations for estimated Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix RO.

Chapter 6: Plant – Hermosa Redondo District

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Hermosa Redondo District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 6-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Pipeline Replacement Program, Meter Replacement Program, and SCADA Upgrade. **Table 6-B** presents ORA project-specific adjustments.

Table 6-A: Capital Budget Summary – Hermosa Redondo District

Hermosa Redondo (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 466.8	\$ 1,097.4	\$ 1,117.8	\$ 1,654.6	\$ 1,084.1
CWS	\$ 7,560.1	\$ 3,266.7	\$ 12,146.3	\$ 6,140.4	\$ 7,278.3
CWS > ORA	\$ 7,093.2	\$ 2,169.3	\$ 11,028.5	\$ 4,485.8	\$ 6,194.2
ORA as % of CWS	6%	34%	9%	27%	19%

1

Table 6-B: Capital Budget Details – Hermosa Redondo District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	67046	Data Acquisition Radio Replacement	\$ -	\$ 133,741	\$ 133,741	0%
	62079	Replace Inlet & Outlet Valves - Sta. 4 - City of Redondo Beach	\$ -	\$ 45,069	\$ 45,069	0%
	62733	Replace 25 HP Horizontal Pumping Equipment - Sta. 23-D	\$ -	\$ 49,481	\$ 49,481	0%
	66931	Install 700'-6" PVC C-900 Main and 12-1" Services. Retire 700'-4" CI Main,	\$ -	\$ 239,510	\$ 239,510	0%
	66931	Install 700'-6" PVC C-900 Main and 12-1" Services. Retire 700'-4" CI Main,	\$ -	\$ 21,600	\$ 21,600	0%
	78285	Inst. 1,812' - 6" PVC Main 18th Street	\$ -	\$ 600,958	\$ 600,958	0%
	78287	Inst. ,888' - 6" PVC Johnston Ave.	\$ -	\$ 645,228	\$ 645,228	0%
	78288	Inst. 538' - 6" PVC Main Thomas Ave.	\$ -	\$ 179,497	\$ 179,497	0%
	HRD0900	Meter Replacement Program	\$ -	\$ 209,383	\$ 209,383	0%
Specifics Total			\$ -	\$ 2,124,467	\$ 2,124,467	0%
Non-Specifics Total			\$ 115,729	\$ 71,100	\$ (44,629)	163%
Carry-Overs Total			\$ 351,106	\$ 5,364,489	\$ 5,013,383	7%
TOTAL 2015			\$ 466,835	\$ 7,560,057	\$ 7,093,221	6%

2

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97890	Replace Asphalt Driveway at Station 23 in the City of Torrance	\$ 37,170	\$ 37,170	\$ -	100%
	99231	Replace Wrought Iron Fence at Station 9	\$ -	\$ 148,803	\$ 148,803	0%
	97625	Upgrade cathodic protection system at Hermosa Redondo: 5 -T1, 5-	\$ 54,018	\$ 54,018	\$ -	100%
	98116	Replacement of pump and motor.	\$ 52,607	\$ 52,607	\$ -	100%
	98540	Replacement of 1 control valve in Hermosa Redondo. Location: 108_009_CV002	\$ 29,266	\$ 29,266	\$ -	100%
	108MRP16	The 2016 main replacement program will replace 5,808 feet of pipelines in the Hermosa Redondo district at an estimated cost of	\$ 709,282	\$ 1,272,841	\$ 563,559	56%
	98102	Hydrant Meter Reduced Pressure Principal Assembly	\$ 11,186	\$ 11,186	\$ -	100%
	HRD0900	Meter Replacement Program	\$ 173,930	\$ 292,851	\$ 118,921	59%
	97874	Purchase 3-DR-900 COLORMETER, HACH	\$ 5,163	\$ 5,163	\$ -	100%
	98356	Replace Air Tools	\$ 18,389	\$ 18,389	\$ -	100%
	98358	Purchase new hand tools for Hermosa/Redondo District.	\$ 6,370	\$ 6,370	\$ -	100%
Specifics Total			\$ 1,097,382	\$ 1,928,664	\$ 831,283	57%
Non-Specifics Total			\$ -	\$ 1,338,000	\$ 1,338,000	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2016			\$ 1,097,382	\$ 3,266,664	\$ 2,169,283	34%

3

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97756	Remove all facilities including 4 redwood tanks totaling 350,000 gallons, 3 split case booster pumps, 2 booster buildings, 1 booster	\$ -	\$ 503,485	\$ 503,485	0%
	97643	Upgrade cathodic protection system at Hermosa Redondo: 9 -T1, 23 -	\$ 38,274	\$ 38,274	\$ -	100%
	97749	Add a flexible connection (EBBA Flex Tend) to the inlet/outlet pipe to each of the four tanks at Hermosa Redondo (HR) Station 9.	\$ -	\$ 352,322	\$ 352,322	0%
	97756	Remove all facilities including 4 redwood tanks totaling 350,000 gallons, 3 split case booster pumps, 2 booster buildings, 1 booster	\$ -	\$ 1,089,502	\$ 1,089,502	0%
	98025	Install overflow air gap and catch basin at Hermosa Redondo Sta.23	\$ -	\$ 16,414	\$ 16,414	0%
	97756	Remove all facilities including 4 redwood tanks totaling 350,000 gallons, 3 split case booster pumps, 2 booster buildings, 1 booster	\$ -	\$ 1,122,025	\$ 1,122,025	0%
	98118	Replacement of pump and motor.	\$ 53,922	\$ 53,922	\$ -	100%
	98120	Replacement of pump and motor.	\$ 58,917	\$ 58,917	\$ -	100%
	98615	Replacement of 1 control valve in Hermosa Redondo. Location: 108_005_CV001	\$ 29,998	\$ 29,998	\$ -	100%
	98754	Install a well level transducer at Station 8. Connect to SCADA	\$ 16,304	\$ 16,304	\$ -	100%
	98756	Install a well level transducer at station 8. Connect to SCADA	\$ 16,304	\$ 16,304	\$ -	100%
	101730	This project proposes a new connection with MWD Second Lower Feeder to provide water to HR in the event the existing connection at	\$ -	\$ 24,973	\$ 24,973	0%
	97756	Remove all facilities including 4 redwood tanks totaling 350,000 gallons, 3 split case booster pumps, 2 booster buildings, 1 booster	\$ -	\$ 797,856	\$ 797,856	0%
	101730	Feeder to provide water to HR in the event the existing connection at the Palos Verdes Feeder is offline	\$ -	\$ 5,051,558	\$ 5,051,558	0%
	108MRP17	pipelines in the Hermosa Redondo district at an estimated cost of \$147 per foot.	\$ 726,021	\$ 1,304,662	\$ 578,641	56%
	HRD0900	Meter Replacement Program	\$ 178,035	\$ 300,172	\$ 122,137	59%
Specifics Total			\$ 1,117,774	\$ 10,776,687	\$ 9,658,913	10%
Non-Specifics Total			\$ -	\$ 1,369,600	\$ 1,369,600	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2017			\$ 1,117,774	\$ 12,146,287	\$ 11,028,513	9%

1

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97642	Pumphouse at HR Sta 27 will be replaced. Facility will house two	\$ -	\$ 295,407	\$ 295,407	0%
	98642	Install Manual Switch Sta 13 Hermosa Redondo	\$ 1,008	\$ 1,008	\$ -	100%
	99305	Install Manual Transfer Switch Sta. 14 Hermosa Redondo.	\$ 1,008	\$ 1,008	\$ -	100%
	97579	Upgrade cathodic protection sytsem at HR- Sta.26 Tank 4, Sta.29	\$ 39,230	\$ 39,230	\$ -	100%
	97754	Add seismic retrofit modifications to the two tanks at Hermosa Redondo Station 23. Each tank will receive the following	\$ -	\$ 207,187	\$ 207,187	0%
	98312	Replace cupola vent and top 6 rungs of the ladder at HR Sta.22 Tank	\$ 12,088	\$ 12,088	\$ -	100%
	98330	Replace existing 20,000 gallon tank with new bolted steel tank at HR Sta.8 Tank 2. Tank to be constructed to match existing piping.	\$ 146,162	\$ 146,162	\$ -	100%
	98121	Replacement of pump and motor.	\$ 60,390	\$ 60,390	\$ -	100%
	98128	Replacement of pump and motor.	\$ 60,390	\$ 60,390	\$ -	100%
	98539	Replacement of 1 control valve in Hermosa Redondo. Location: 108_005_CV001	\$ 30,748	\$ 30,748	\$ -	100%
	98642	Install Manual Switch Sta 13 Hermosa Redondo	\$ 59,058	\$ 59,058	\$ -	100%
	99169	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system	\$ -	\$ 537,724	\$ 537,724	0%
	99305	Install Manual Transfer Switch Sta. 14 Hermosa Redondo.	\$ 59,058	\$ 59,058	\$ -	100%
	97995	Replace Greesand at Station 8-02 in The City of Redondo Beach	\$ 86,930	\$ 86,930	\$ -	100%
	98005	Replace Greesand at Station 22-01 in The City of Redondo Beach	\$ 86,930	\$ 86,930	\$ -	100%
	98007	Replace Greesand at Station 30-01 in The City of Redondo Beach	\$ 86,930	\$ 86,930	\$ -	100%
	98446	Construct contact piping and potassium permanganate feed system at Sta. 30-01 to address taste and odor issues to allow well to be placed	\$ -	\$ 1,324,357	\$ 1,324,357	0%
	108MRP18	The 2018 main replacement program will replace 5,808 feet of pipelines in the Hermosa Redondo district at an estimated cost of	\$ 742,574	\$ 1,337,278	\$ 594,704	56%
	HRD0900	Meter Replacement Program	\$ 182,094	\$ 307,676	\$ 125,582	59%
Specifics Total			\$ 1,654,599	\$ 4,739,560	\$ 3,084,961	35%
Non-Specifics Total			\$ -	\$ 1,400,800	\$ 1,400,800	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
1	TOTAL 2018		\$ 1,654,599	\$ 6,140,360	\$ 4,485,761	27%

C. DISCUSSION

The Hermosa Redondo District recorded \$2,854,600 in annual average gross plant additions for the most recent six-year period 2009-2014.⁷⁹ Table 6-C compares CWS's and ORA's estimates against recorded annual average gross plant additions.

⁷⁹ Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

Table 6-C: Capital Budget Summary – Hermosa Redondo District

Hermosa Redondo (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 2,854.6	100%
ORA	\$ 466.8	\$ 1,097.4	\$ 1,117.8	\$ 1,654.6	\$ 1,084.1	38%
CWS	\$ 7,560.1	\$ 3,266.7	\$ 12,146.3	\$ 6,140.4	\$ 7,278.3	255%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for Specific projects in Section 1, 2016-2018 Non-Specific projects in Section 2, and 2015 capital budget in Section 3 below.

1. Specific Projects

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Pipeline Replacement Program (PIDs 99212, 99214 & 99215)

CWS requests \$1,272,841 in 2016, \$1,304,662 in 2017, and \$1,337,278 in 2018 for pipeline replacement in Hermosa Redondo District. CWS proposes to replace 5,807 feet per year. ORA evaluated the leak rate, water loss, system age, results of American Water Works Association (AWWA) recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 6-D** below shows ORA's recommendation for pipeline replacement and the associated budgets in this district.

Table 6-D: Pipeline Replacement Program Budget – Hermosa Redondo

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099212	2,889	\$ 709,282	5,807	\$ 1,272,841
2017	00099214	2,889	\$ 726,021	5,807	\$ 1,304,662
2018	00099215	2,889	\$ 742,574	5,807	\$ 1,337,278

1 ***b. Meter Replacement Program (PID HRD0900)***

2 CWS requests \$292,851 in 2016, \$300,172 in 2017 and \$307,676 in 2018 for small and
3 large meter replacement in the Hermosa Redondo District. CWS proposes to replace
4 1,250 small meters and nine large meters over the next three years. **Table 6-E** below
5 compares CWS's requests on small and large meter replacement budgets and ORA's
6 recommendation. ORA's recommended budgets are based on detailed analysis and
7 recommendation in its Report on Plant – Common Issues.

8 **Table 6-E: Meter Replacement Budgets –Hermosa Redondo**

District:		Hermosa Redondo	
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 173,930	\$ 292,851
2017	0900	\$ 178,035	\$ 300,172
2018	0900	\$ 182,094	\$ 307,676

9
10 ***c. Replace Wrought Iron Fence at Station 9 (PID 99231)***

11 CWS requests \$148,803 in 2016 to replace the entire fence around Station 9 (1,192 feet)
12 including two motorized sliding gates. CWS's project justification claims the
13 replacement is needed because the existing fence is failing.

14 According to CWS's project justification, the fence posts were corroded due to age and
15 the coastal environment. CWS stated the fence was replaced in 2007.⁸⁰ CWS is
16 requesting to replace the entire fence within 10 years from the last replacement. This is
17 problematic due to the young age of the fence. Wrought iron fences could have 50 years

⁸⁰ CWS response to ORA data request BYU-004, Question 1a.

1 of useful life.⁸¹ If the entire fence truly requires replacement in less than 10 years where
2 the useful life of the fence is 50 years, it can only be attributed to CWS's poor
3 maintenance, poor workmanship by the contractors, or use of cheap materials. Thus,
4 CWS's claim of age of the fence cannot be the reason for replacement. Also, CWS failed
5 to substantiate its claim that the corrosion was due to the "coastal environment." When
6 ORA asked CWS to provide evidence to show the corrosion on the fence was due to
7 coastal environment, CWS provided three pictures of two different sections of the
8 fence.⁸² Two of the three pictures were identical to the pictures already provided in
9 CWS's project justification. No information was provided to address ORA's question
10 regarding the coastal environment being the reason for the corrosion. ORA finds CWS's
11 claim on the age and coastal environment being the reasons for the fence corrosion are
12 unjustified. Rather, ORA considers this as a maintenance issue. The sections with heavy
13 rust can be repaired or replaced in sections to minimize the cost to ratepayers.

14 CWS's project justification starts with the following when it is describing the need for the
15 fence replacement:⁸³

16 "The existing wrought iron fence is failing."
17 During ORA's site visit, ORA examined the fence around the premise and noticed the
18 sections of fence on the sunny sides did not show much rust and stands firm. On the
19 other hand, the section of fence along the shaded area with many trees and weeds show
20 more rusted spots. In the shaded area, ORA also noticed that the bottom of the fence
21 rusted more than the top of the fence. The two sections showed rust on the bottoms, each

⁸¹ FannieMae, *INSTRUCTIONS FOR PERFORMING A MULTIFAMILY PROPERTY CONDITION ASSESSMENT (Version 2.0)* - APPENDIX F: ESTIMATED USEFUL LIFE TABLES, p. 2.

⁸² CWS response to ORA data request BYU-004, questions 1b and 1c.

⁸³ CWS Hermosa Redondo Project Justifications, p. HR PJ-215.

1 section is approximately eight feet wide. Nonetheless, the entire perimeter of the fence
2 was standing, not failing.

3 If the coastal environment was to be blamed for the fence corrosion, then the rusting
4 should have been found throughout the fence: sunny or shaded; top or bottom. ORA
5 noticed the bottom portion of the fence segments that showed heavy corrosion were
6 covered with wet foliage. ORA also noticed sprinkler heads (on the neighbor's side)
7 around the rusted sections of the fence which might have contributed to the heavy rusting
8 on the bottom of the fence sections. Since one of the project justifications was due to the
9 neighbor complaints, ORA asked CWS whether it had sought to replace or repair the
10 fence by splitting the cost with the neighbors. CWS provided only one complaint letter
11 from one neighbor⁸⁴. In the complaint, the neighbor was requesting that CWS repair
12 certain sections of fence. CWS's project justification was written in a nuance that the
13 complaint was from many neighbors. It states:⁸⁵

14 "...the surrounding homes have complained that it makes their properties
15 vulnerable to intrusion."

16 However, CWS was only able to provide one complaint from one neighbor. ORA also
17 observed during ORA's site visit that the rusted section of the fence was only on one
18 neighbor's side. Nevertheless, CWS failed to address ORA's concern on the option of
19 cost splitting with the neighbor for repairing sections of the fence. CWS did not prove
20 that the complaint was from the "surrounding homes" of the fence either. CWS's
21 statement above from the project justification made it sound like the entire fence has
22 problems. Heavy rusting was only found in the limited number of sections next to one
23 neighbor. In this accord, CWS also failed to prove that the entire fence is failing.

⁸⁴ CWS response to ORA data request BYU-004, question 1d.

⁸⁵ CWS Hermosa Redondo Project Justifications, p. HR PJ-215.

1 Additionally, according to CWS's project justification Attachment A, which was a
2 vendor's quote on the project, the job scope includes installing two motorized sliding
3 gates and an access door. The need for these items was never justified.

4 In summary, CWS's project justification lacks evidence and CWS's response to ORA's
5 data requests further proved this project is unjustified. Thus, replacing the entire fence
6 (1,192 feet) at Station 9 should be denied. Some sections that displayed heavy corrosions
7 should be repaired (either replacing the section panel or replacing the bars) and repairs
8 (maintenance) on the existing facilities should be charged to CWS's maintenance
9 expense. ORA recommends the Commission disallow this project.

10 *d. Replace SCADA Software and Hardware (PID 99169)*

11 CWS requests \$537,724 in 2017 to install new hardware and software for the proposed
12 new SCADA system. This project is related to CWS's General Office SCADA Upgrade
13 Project which proposes to replace the company's existing SCADA system with new
14 software and hardware.⁸⁶ ORA's recommendation on the SCADA system upgrade is
15 discussed in the ORA's Report on Plant – Common Issues.

16 In accordance with the Common Issues section discussion of SCADA projects, ORA
17 recommends the Commission to disallow this project.

18 *e. HR Station 9 Seismic Retrofit (PID 97749)*

19 CWS requests \$352,322 in 2017 to install flexible connections (Flex Tend) to the
20 inlet/outlet pipes of the four tanks at Station 9, construct retaining walls to accommodate
21 the Flex Tends, modify piping around the Station 9, and install a 30-inch manway on
22 Tank 3.

⁸⁶ Except for CWS's East Los Angeles District which runs on different SCADA software.

1 CWS’s project justification states the Flex Tends (flexible connections) are required to
2 compensate for the seismic movements; and the retaining walls and piping modifications
3 are needed to accommodate the Flex Tends. CWS refers to the California Safe Drinking
4 Water Act & Related Laws and Regulations, Title 22, Chapter 16 (Waterworks
5 Standards), Article 6, Distribution Reservoirs as a basis for this project. The Waterworks
6 Standards specifies that the reservoir construction should be in accordance with AWWA
7 standards which CWS identified AWWA D100-05, Section 13.6. However, the
8 Waterworks Standards applies to new constructions⁸⁷ and the water tanks at Station 9
9 were constructed between 1953 and 1965 as stated in CWS’s project justification. The
10 existing inlet/outlet connections on the tanks were built to the standards existing at that
11 time. According to a document from California Department of Public Health (CDPH), it
12 gives the following explanations to the Section 64585 of the Waterworks Standards:⁸⁸

13 “The requirements in subsection ... (b) would apply only to new reservoirs, since
14 it would be COSTLY, ONEROUS, and UNREASONABLE to require
15 compliance by existing reservoirs.” [Emphasis added]

16 The AWWA standards referenced in CWS’s project justification is found in the
17 subsection (b) of the Waterworks Standards, Section 64585. Thus, CWS’s request is not
18 required by the Waterworks Standards.

19 Also, CWS’s project justification overly exaggerates the seismic threat to the piping
20 connections by stating:

⁸⁷ AWWA D100-05 was referenced in the Waterworks Standards, Article 6, Section 64585 (b) (1).

⁸⁸ CDPH, *Final Statement of Reasons, Waterworks Standards, Title 22, California Code of Regulations*, December 20, 2007. This is the document that describes and explains the reasons behind the codes.

1 “In the event of an earthquake, the differential movement between the earth and
2 the tank will stress the tank shell/wall, via the rigid piping connection, and could
3 lead to failure.”⁸⁹

4 CWS did not specify the magnitude of the earthquake which will be strong enough to
5 damage or fail the piping on the tanks. It sounds like an earthquake with any magnitude
6 will damage the tank piping. CWS’s tanks at Station 9 withstood high magnitude
7 earthquakes in Southern California during the Whittier Narrows Earthquake of 1987 and
8 the Northridge Earthquake of 1994 with the existing configuration. Additionally, some
9 of the connections on the tanks already have flexible connections to compensate for
10 seismic movements. ORA finds CWS’s request of flexible connections at Station 9 lacks
11 justification on the immediate needs.

12 Consequently, the retaining wall construction is not needed to accommodate the new Flex
13 Tends; piping modifications around the station is not needed; and 30-inch manway on the
14 existing tanks is also a new construction standard that does not apply to the existing
15 facilities. Therefore, ORA recommends that the Commission to disallow this project
16 request.

17 ***f. HR Station 23 Seismic Retrofit (PID 97754 & 98025)***

18 CWS requests \$207,187 in 2018 to install flexible connections (Flex Tend) to the
19 inlet/outlet pipes of the two tanks at Station 23, modify the overflow system to have an
20 air gap, install two 30-inch manway on the tanks, and construct a catch basin to divert
21 water from Tank 2’s overflow system. CWS also requests \$16,414 in 2017 to modify the
22 overflow system and construct a catch basin for Tank 3 at the same site.

⁸⁹ CWS Hermosa Redondo Project Justifications, p. HR PJ-234.

1 The 30-inch manway on the existing tanks, air gap modification on the existing overflow,
2 and a new catch basin around the overflow is also a new construction standard that does
3 not apply to the existing facilities. For the same reasons stated in PID 97749, ORA
4 recommends the Commission disallow this project request.

5 *g. Station 24 Rebuild (PID 97756)*

6 CWS requests \$3,512,868 in 2017 to demolish the existing piping, tanks and pumps at
7 Station 24 and construct two new welded steel tanks, two booster pumps, new pump
8 station building, and new electrical panelboard. This project also proposes to install a
9 booster pump at Station 23 along with 2,600 feet of transmission main to maintain
10 service to Zone 500 while Station 24 is under construction.

11 CWS's project justification provides several needs at Station 24 that requires a complete
12 station rebuild.

13 *i. Pump Efficiency*

14 CWS states the existing three pumps are below 30% efficiency and are scheduled for
15 replacement. CWS's project justification also states due to the difficulties of finding
16 pumps that exactly matches the current configuration of the station, extensive piping
17 modification would be needed in order to just replace the pumps. CWS argues that a
18 complete rebuild of the station, along with other improvements needed for other facilities
19 on the station, would be more cost efficient than replacing pumps on the existing
20 configuration. However, CWS did not provide any information on the direct replacement
21 cost for ORA to compare with the complete station rebuild.

1 Each of the three booster pumps' design capacity is 450 gpm.⁹⁰ The response also states
2 that due to the poor efficiencies of the booster pumps, their combined booster capacity is
3 249 gpm where the Maximum Day Demand (MDD) and the Peak Hourly Demand (PHD)
4 of the Zone 500 are 271 gpm and 410 gpm, respectively. The 2014 demands for the Zone
5 500 are as follows:⁹¹

- 6 • Average Day Demand (ADD): 152 gpm
- 7 • Maximum Day Demand (MDD): 224 gpm
- 8 • Peak Hourly Demand (PHD): 336 gpm

9 It appears that replacing one of the boosters or adding a booster capacity similar to the
10 existing booster pump's design capacity would be enough to meet the demands. Instead,
11 CWS requests a complete station rebuild.

12 Additionally, Zone 500 currently has two 4-inch standby connections to the Palos Verdes
13 district via pressure reducing valves (PRV).⁹² One PRV is located at Via Colusa
14 (Standby PRV) connected to the Palos Verdes district's Zone J-600, and the second PRV
15 is located at Via Alameda (Emergency PRV) connected to the Palos Verdes district's
16 Zone D-500-1.⁹³ Even though CWS's project justification states that the Palos Verdes
17 district's Zone D-500 is deficient in several areas to accommodate the need for the
18 Hermosa Redondo district's Zone 500,⁹⁴ CWS remains silent about the Zone J-600 which
19 would provide water to Hermosa Redondo's Zone 500 via a standby PRV. According to

⁹⁰ CWS response to ORA data request BYU-004.

⁹¹ CWS response to ORA data request BYU-009.

⁹² CWS Water Supply and Facilities Master Plan - Rancho Dominguez Districts, pp. 5-8 & 5-9.

⁹³ Ibid, p. 6-10.

⁹⁴ CWS Project Justification, p. HR PJ-253.

1 CWS, the estimated capacity of two 4-inch PRVs can be up to 1,600 gpm.⁹⁵ Based on the
2 2014 demands of the Zone 500, the existing pumps can meet the ADD and MDD. PHD
3 of the Zone 500 can also be met by the pumps plus drawing only 87 gpm of water from
4 the Via Colusa PRV.

5 *ii. Tanks*

6 CWS's project justification provides several reasons for these tanks to be replaced. CWS
7 states the existing tanks are made of redwood and it is not an industry standard. Whether
8 this material is currently industry standard or not, when the tanks were built, it was
9 authorized for the water utility service and it is still serving CWS's customers. The tanks
10 are not in violation of any regulatory requirements, and are in good working order. CWS
11 states that wooden tanks are a potential fire hazard without providing any data whether
12 the tanks were ever on fire.⁹⁶ If properly coated, wooden tanks should not catch fire
13 easily. It might seem a wooden structure may catch fire easily, but it is extremely
14 difficult to ignite a log when it contains moisture. The redwood tanks at Station 24
15 currently hold water in them. CWS also states that Tank B is leaking, but it also states it
16 is slated for relining to address the issue. ORA considers this a repairable issue.
17 Additionally, CWS states the tanks are not anchored down for seismic measures and the
18 overflow piping does not provide air gaps as the current standard requires. As previously
19 discussed in the Station 9 Seismic Retrofit project, the referenced standards apply to new
20 constructions and the existing configuration of the tanks and their overflow piping is a
21 grandfathered-in condition. ORA does not find any issues with the tanks that would
22 require replacement.

⁹⁵ CWS Water Supply and Facilities Master Plan – Rancho Dominguez Districts, p. 11-10.

⁹⁶ CWS Hermosa Redondo Project Justifications, p. HR PJ-252, CWS simply stated "potential fire hazard" without any other information to substantiate the threat.

1 *iii. Hydro-Pneumatic Tanks*

2 CWS's project justification states the existing two hydro-pneumatic tanks on site need to
3 be replaced due to corrosion on the tanks that reduced the shell thickness. CWS's project
4 justification states that the two hydro-pneumatic tanks are tied to a single gate valve, so it
5 is impossible to replace the tanks without loss of service to customers. According to the
6 information discussed above, when the booster pumps' capacities are less than 20 to 25%
7 of the design capacity, the surge created by the booster pumps during normal operation
8 would be minimal. Thus, keeping the operation with the existing hydro-pneumatic tanks
9 does not pose much danger. Also, if the hydro-pneumatic tank replacement becomes
10 necessary, CWS can maintain the service to the Zone 500 by utilizing the above
11 mentioned PRVs and replace the hydro-pneumatic tanks in the future.

12 *iv. Station Piping*

13 CWS's project justification states the existing piping at the station is made of cast iron or
14 asbestos cement which can break during site works with heavy equipment operating over
15 the piping locations. Should the brittle nature of the existing piping become an issue,
16 CWS can replace pipes section by section with a different material as needs arise.

17 CWS is also requesting to install a booster pump at a different location and installing a
18 transmission main to provide service to the 500 Zone during the station rebuild project
19 construction. As ORA already discussed, ORA did not find any immediate need for the
20 station rebuild, thus, a new booster and transmission main are not needed.

21 For the reasons discussed above, ORA recommends the Commission disallow CWS's
22 request for Station 24 Rebuild.

23 *h. Station 27 Pump House Replacement (PID 97642)*

24 CWS requests \$295,407 in 2018 to demolish the existing 10' X 20' metal pump house
25 and construct a Concrete Masonry Unit (CMU) pump house in its place.

26 CWS's project justification states the need for the replacement of the existing steel pump
27 house is due to "extensive rust and metal loss in the steel sheeting." The project

1 justification also states the existing building was recoated recently, but the loss of
2 structural material is apparent in the building base. The project justification further states
3 that the existing building does not provide acoustic dampening; therefore, CMU is
4 needed for sound dampening.

5 To verify the severity of the “extensive rust and metal loss” of the existing building, ORA
6 asked CWS to provide information regarding how the “apparent” rusting on the existing
7 building hinders the structural integrity of the pump house. CWS provided the following
8 answer:

9 “The continued corrosion of the sheeting provides access to rodents and
10 insects.”⁹⁷

11 ORA was concerned about the structural integrity of the existing building due to the fact
12 that CWS requests replacing a metal structure with a more sturdy CMU. Since CWS
13 could not provide a direct response regarding structural integrity, ORA can only conclude
14 that susceptibility to rodents/insects does not hinder the structural integrity of the existing
15 pump house. Therefore, the claimed rust and metal loss does not constitute for the reason
16 to request for building replacement.

17 Also, CWS states the existing building was recoated in 2010⁹⁸, but ORA could not verify
18 whether CWS had used the right type of paint or not because CWS stated that the pump
19 house was painted during the site’s tank exterior coating project. The site’s tank is made
20 of steel but the pump house panels were made of galvanized sheet metal. ORA noticed
21 paint on the pump house was peeling which could be a sign of a poor surface preparation
22 or wrong paint application. According to a paint manufacturer’s article, a galvanized

⁹⁷ CWS response to ORA data request BYU-004, Question 4.c.

⁹⁸ CWS response to ORA data request BYU-004, Question 4.a.

1 sheet metal surface needs to be cleaned with a water based degreaser and be painted with
2 an acrylic paint.⁹⁹ CWS claims in the same response that the building painting did not
3 follow “CWS’s rigorous standards” because it was done as “maintenance.”¹⁰⁰ CWS did
4 not specify what the “rigorous standards” were for the building painting and stated it is
5 performing a lower quality job on maintenance work. The entire building was recoated
6 only five years ago and after recoating rusted spots, CWS should have addressed the rusts
7 to prevent further corrosion at that time. Instead of requesting a replacement of the entire
8 building due to a “sub-standard maintenance,” CWS should perform a proper
9 maintenance per CWS’s “rigorous standards.” This is a maintenance issue and CWS
10 should charge it to its maintenance expenses budget account instead of requesting a
11 capital project budget.

12 For the noise issues, CWS stated that it did not receive any complaints from neighbors,
13 but from verbal comments from people passing by with no records.¹⁰¹ ORA questioned
14 CWS whether it considered applying sound absorbing panels should the pump noise
15 become an issue. CWS’s response to ORA’s question was to simply refer to its response
16 to the previous complaints response with no further explanation. ORA can only interpret
17 CWS’s response as: “since there were no complaints, CWS did not consider sound
18 absorbing panels on the existing building;” thus, making CWS’s project need for acoustic
19 dampening unnecessary. Furthermore, ORA requested CWS to provide a comparison of
20 sound attenuation performance between the requested CMU building versus sheet metal
21 building with sound absorbing panels installed. In its response to ORA Data Request
22 BYU-004, Question 4.f, CWS failed to provide such a comparison. Instead, CWS

⁹⁹ Sherwin-Williams article, *Peeling – From Galvanized Metal*, <http://www.sherwin-williams.com/home-builders/products/resources/problem-solver/sw-article-pro-peelingfromgalv.html>

¹⁰⁰ CWS response to ORA Data Request BYU-004, Question 4.b.

¹⁰¹ CWS response to ORA data request BYU-004, Question 4.d.

1 provided a statement: “the panels provide insulation and proper ventilation to ensure
2 excessive heat does not damage equipment.” During ORA’s site visits, CWS showed
3 numerous pump enclosures made of sheet metal that had acoustic panels installed. These
4 pump enclosures were recently constructed to “attenuate” pump noise. CWS’s
5 explanations during the site visit emphasized the performance of the installed acoustic
6 panels. Thus, it is hard for ORA to simply accept CWS’s response that the panels are for
7 insulation and ventilation purposes only.

8 For the above findings and reasons, ORA recommends the Commission disallow CWS’s
9 request for the building replacement.

10 *i. Station 30 Well Treatment (PID 98446)*

11 CWS requests \$1,324,357 in 2018 to install an additional treatment system to the Well
12 30-01 which is currently off line due to Secondary Maximum Contaminant Level (SMCL)
13 issues for taste and odor.

14 CWS’s project justification states the Well 30-01 already has manganese greensand
15 treatment, but is currently offline due to SMCL issues for taste and odor. CWS’s main
16 concern about the requested project is to offset the purchased water cost by reactivating
17 the Well 30-01 with 750 gpm capacity. SMCL issues are often addressed by blending
18 with other sources of water. The Zone 225-2, which the Well 30-01 serves, already has
19 purchased water connections: WB-2B, WB-5, and WB-29.¹⁰² CWS should have
20 considered blending as an option. Since the requested project, Station 30 Well Treatment,
21 proposes a pilot study before the treatment construction, ORA finds it is more logical to
22 require CWS to provide a comparison of the project cost including blending as an
23 alternative in the next GRC. ORA’s finding is reasonable especially since this project is

¹⁰² CWS Water Supply and facilities Master Plan, Rancho Dominguez District, Volume 1, p. 5-2.

1 proposed in 2018. Thus, ORA recommends the Commission disallow CWS's request for
2 an additional treatment at Station 30 at this time.

3 *j. Purchased Water Connection – MWD Secondary Feeder (PID 101730)*

4 CWS requests \$5,076,530 in 2017 to construct a new connection with the West Basin
5 Municipal Water District (West Basin) a Metropolitan Water District (MWD) member
6 agency and regional wholesaler.

7 According to CWS's project justification, CWS states that when MWD performed a
8 scheduled shutdown, due to maintenance, of the West Basin Connection #16 (WB-16) for
9 four days in January 2015, CWS's system barely met the system demand even though it
10 occurred during low demand season. To provide redundancy to the WB-16, CWS
11 proposes an additional feeder to the system.

12 ORA asked CWS whether MWD performed any scheduled maintenance in seasons other
13 than winter in the past. CWS stated that the January 2015 MWD planned shutdown was
14 the first scheduled extended shutdown.¹⁰³ ORA finds it is not reasonable for CWS to
15 plan for such rare event, especially, when CWS met the system demand successfully with
16 the existing system configuration. CWS's project justification states:

17 "It was evident that service could not be maintained if the closure lasted two more
18 days longer."¹⁰⁴

19 This statement indicates the system configuration can accommodate up to 6 days of
20 MWD shutdown. CWS states that it does not have any records of MWD shutdowns other
21 than its operational staff's verbal comment stating minor/short term (less than 1 day)

¹⁰³ CWS response to ORA data request BYU-004, Question 6.a.

¹⁰⁴ CWS Hermosa Redondo Project Justifications, p. HR PJ-292.

1 shutdowns have occurred in the past.¹⁰⁵ The project justification states if the shutdown
2 lasted more than the scheduled four days, CWS might have ran out of water. CWS stated
3 that WB-16 had never been down for more than four days¹⁰⁶. CWS's fear for running out
4 of water due to MWD's extended shutdown is imprudent. Additionally, CWS stated that
5 the referenced planned shutdown does not occur normally¹⁰⁷. ORA finds that CWS does
6 not have to prepare for an abnormal condition that only occurred once, especially when
7 CWS demonstrated that the existing system configuration was enough to meet the
8 demand for four days. Thus, ORA finds CWS's project justification lacks immediate
9 need for the project and recommends the Commission disallow this project.

10 **2. Non-Specific Budgets for 2016-2018**

11 CWS requests \$4,108,400 in the Non-Specific Budget to address unforeseen, unplanned,
12 and emergency projects and regulatory compliant projects. ORA's Report on Plant -
13 Common Issues presents ORA's recommended total disallowance of this budget.

14 **3. 2015 Capital Budget**

15 CWS requests approximately \$7.5 million for plant additions in 2015, which consist of
16 projects authorized for 2015 and projects authorized from previous GRCs. ORA's
17 Report on Plant - Common Issues presents its analysis and basis for adjusting the 2015
18 capital additions for Hermosa Redondo.

¹⁰⁵ CWS response to ORA Data Request BYU-004, Question 6.a.

¹⁰⁶ CWS response to ORA Data Request BYU-004, Question 6.b.

¹⁰⁷ CWS response to ORA Data Request BYU-004 Question 6.c.

1 **D. CONCLUSION**

2 ORA's recommendations presented above have been incorporated in the calculations for
3 estimated Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix
4 RO.

Chapter 7: Plant – Palos Verdes

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Palos Verdes District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 7-A** below. ORA's estimated plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Pipeline Replacement Program, Advanced Metering Infrastructure (AMI)/Automated Meter Reading (AMR), Meter Replacement Program, Generator Replacement, Control Valve Replacement, Pump and Motor Replacement, and Supervisory Control and Data Access (SCADA) System Upgrade. **Table 7-B** presents ORA project-specific adjustments.

Table 7-A: Capital Budget Summary – Palos Verdes District

Palos Verdes (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 4,535.3	\$ 1,551.1	\$ 1,339.1	\$ 1,484.5	\$ 2,227.5
CWS	\$ 15,810.1	\$ 14,707.7	\$ 9,553.2	\$ 69,884.4	\$ 27,488.9
CWS > ORA	\$ 11,274.9	\$ 13,156.6	\$ 8,214.1	\$ 68,399.9	\$ 25,261.4
ORA as % of CWS	29%	11%	14%	2%	14%

Table 7-B: Capital Budget Summary – Palos Verdes District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	63068	Genset - Sta. 15	\$ -	\$ 288,412	\$ 288,412	0%
	63110	Chelsea Road from Yarmouth to Avenida Mirola - 1538' 6" DI	\$ 413,382	\$ 301,641	\$ (111,741)	137%
	63110	Chelsea Road from Yarmouth to Avenida Mirola - 1538' 6" DI	\$ 82,774	\$ 15,840	\$ (66,934)	523%
	63110	Chelsea Road from Yarmouth to Avenida Mirola - 1538' 6" DI	\$ 29,318	\$ 16,800	\$ (12,518)	175%
	63332	Replace Mineral Surface Roof Covering - Sta. 51 - Res. 22	\$ 36,759	\$ 54,110	\$ 17,351	68%
	63358	Back Up Generator - Sta. 22	\$ -	\$ 936,309	\$ 936,309	0%
	65460	Replace Blow-Offs - Various Locations	\$ -	\$ 36,029	\$ 36,029	0%
	65463	Replace Valve Casings at various locations in the Palos Verdes System.	\$ -	\$ 36,029	\$ 36,029	0%
	65466	Upgrade Sample Room - Operations Center	\$ -	\$ 45,325	\$ 45,325	0%
	65611	Replace PRV H-126-6424 Monero	\$ -	\$ 134,029	\$ 134,029	0%
	65730	Slurry Seal Driveway - Sta. 48 T1 Res. 17	\$ -	\$ 35,973	\$ 35,973	0%
	65731	Slurry Seal - Sta. 44 T1 Res. 8	\$ -	\$ 41,370	\$ 41,370	0%
	66629	Replace Pumping Equipment - Sta. 23-D	\$ -	\$ 34,200	\$ 34,200	0%
	66629	Replace Pumping Equipment - Sta. 23-D	\$ -	\$ 193,680	\$ 193,680	0%
	70070	Pipeline Condition Assessment Alternatives Report for D500 Zone - 20 Inch Replacement between Crenshaw BLVD and Reservoir 5	\$ -	\$ 134,752	\$ 134,752	0%
	77576	Install 377' -6" DI main on Mesaba Drive in the city of Rancho Palos Verdes. Retire 377' Transite main.	\$ 132,504	\$ 134,328	\$ 1,824	99%
	77576	Install 377' -6" DI main on Mesaba Drive in the city of Rancho Palos Verdes. Retire 377' Transite main.	\$ 30,945	\$ 18,720	\$ (12,225)	165%
	77576	Install 377' -6" DI main on Mesaba Drive in the city of Rancho Palos Verdes. Retire 377' Transite main.	\$ 15,025	\$ 8,400	\$ (6,625)	179%
	77577	Install 200' -6" DI Main on W. Oconto Avenue in the city of Rancho Palos Verdes. Retire 200' -4" Transite main.	\$ 151,193	\$ 74,376	\$ (76,817)	203%
	77577	Install 200' -6" DI Main on W. Oconto Avenue in the city of Rancho Palos Verdes. Retire 200' -4" Transite main.	\$ 28,321	\$ 14,400	\$ (13,921)	197%
	77578	Install 300' -6" DI main on Valor Pl & 162' -6" DI main on Helm Pl. in the city of Rancho Palos Verdes. Retire 300' -4" Transite main & 162' -4" Transite main.	\$ 124,555	\$ 159,913	\$ 35,358	78%
	77578	Install 300' -6" DI main on Valor Pl & 162' -6" DI main on Helm Pl. in the city of Rancho Palos Verdes. Retire 300' -4" Transite main & 162' -4" Transite main.	\$ 27,097	\$ 17,280	\$ (9,817)	157%
	77579	Install 1133' -6" DI main on Via Almar & 173' -6" DI main on Paseo Del Mar in the city of Palos Verdes Estates. Retire 1133' -4" Transite main on Via Almar & 173' -4" Transite main on Paseo Del Mar.	\$ -	\$ 441,695	\$ 441,695	0%
	77579	Install 1133' -6" DI main on Via Almar & 173' -6" DI main on Paseo Del Mar in the city of Palos Verdes Estates. Retire 1133' -4" Transite main on Via Almar & 173' -4" Transite main on Paseo Del Mar.	\$ -	\$ 57,600	\$ 57,600	0%
	77580	Install 600' -6" DI main on Chelsea Rd and 500' -6" DI main on Via Anacapa in the city of Palos Verdes Estates. Retire 600' -4" Transite on Chelsea Rd and 500' -4" Transite on Via Anacapa in the city of Palos Verdes Estates. Retire 600' -4" Transite on Chelsea Rd and 500' -4" Transite on Via Anacapa in the city of Palos Verdes Estates.	\$ 272,332	\$ 367,372	\$ 95,041	74%
	77580	Install 600' -6" DI main on Chelsea Rd and 500' -6" DI main on Via Anacapa in the city of Palos Verdes Estates. Retire 600' -4" Transite on Chelsea Rd and 500' -4" Transite on Via Anacapa in the city of Palos Verdes Estates.	\$ 25,031	\$ 20,160	\$ (4,871)	124%
	77581	Install 240' -6" DI main on Avenida Refinida, 240' -6" DI main on Avenida Magnifica and 220' -6" DI main on Esplendida Ave. in the city of Rancho Palos Verdes. Retire 240' -4" Transite main on Ave. Refinida, 240' -4" Transite main on Ave. Magnifica and 220' -4" Transite main on Esplendida Ave. in the city of Rancho Palos Verdes.	\$ 266,890	\$ 238,245	\$ (28,644)	112%
	77581	Install 240' -6" DI main on Avenida Refinida, 240' -6" DI main on Avenida Magnifica and 220' -6" DI main on Esplendida Ave. in the city of Rancho Palos Verdes. Retire 240' -4" Transite main on Ave. Refinida, 240' -4" Transite main on Ave. Magnifica and 220' -4" Transite main on Esplendida Ave. in the city of Rancho Palos Verdes.	\$ 60,137	\$ 23,040	\$ (37,097)	261%
	77582	Install 215' -6" DI main on Waukesha Place in the city of Rancho Palos Verdes. Retire 215' -4" Transite main.	\$ 89,111	\$ 77,504	\$ (11,607)	115%
	77582	Install 215' -6" DI main on Waukesha Place in the city of Rancho Palos Verdes. Retire 215' -4" Transite main.	\$ 17,734	\$ 5,760	\$ (11,974)	308%
	77583	Install 240' -6" DI main on Menominee Place in the city of Rancho Palos Verdes. Retire 240' -4" Transite main.	\$ 116,253	\$ 86,768	\$ (29,485)	134%
	77583	Install 240' -6" DI main on Menominee Place in the city of Rancho Palos Verdes. Retire 240' -4" Transite main.	\$ 24,361	\$ 11,520	\$ (12,841)	211%
	77584	Install 280' -6" DI main on Via Encanto in the city of Rolling Hills Estates. Retire 280' -4" Transite main.	\$ 99,098	\$ 98,871	\$ (227)	100%
	77584	Install 280' -6" DI main on Via Encanto in the city of Rolling Hills Estates. Retire 280' -4" Transite main.	\$ 16,373	\$ 7,200	\$ (9,173)	227%
	77585	Install 205' -6" DI main on S. Rockhurst Lane in the city of Rancho Palos Verdes. Retire 205' -4" Transite main.	\$ 71,948	\$ 75,708	\$ 3,761	95%
	77585	Install 205' -6" DI main on S. Rockhurst Lane in the city of Rancho Palos Verdes. Retire 205' -4" Transite main.	\$ 25,070	\$ 12,960	\$ (12,110)	193%
	PVD0900	Meter Replacement Program	\$ -	\$ 143,935	\$ 143,935	0%
Specifics Total			\$2,156,209	\$ 4,400,256	\$ 2,244,047	49%
Non-Specifics Total			\$ 133,394	\$ 690,450	\$ 557,056	19%
Carry-Overs Total			\$2,245,650	\$10,719,419	\$ 8,473,769	21%
TOTAL 2015			\$4,535,253	\$15,810,125	\$11,274,872	29%

1

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99046	Installation of Pump Shelter	\$ 49,096	\$ 49,096	\$ -	100%
	97421	Modifications to reservoir to allow adequate water cycling within tank. This project required to return Reservoir 7 to operational status.	\$ -	\$ 14,079	\$ 14,079	0%
	97948	Investigate structural integrity of roof, columns, shell and floor to develop clear scope of work for 2017 structural upgrade project.	\$ 59,859	\$ 59,859	\$ -	100%
	98131	Replacement of pump and motor.	\$ 52,607	\$ 52,607	\$ -	100%
	98133	Replacement of pump and motor.	\$ -	\$ 191,174	\$ 191,174	0%
	98224	Replace pumps 4A & 4C in Station 4. New pump house and electrical panel will also	\$ -	\$ 583,146	\$ 583,146	0%
	98616	Replacement of 7 control valves in Palos Verdes. Location: 122_023_CV001, 122_000_CV171, 122_000_CV068, 122_000_CV198, 122_000_CV023, 122_000_CV027, 122_000_CV040	\$ 117,065	\$ 204,863	\$ 87,798	57%
	99480	Replacement of existing generator at Station 38	\$ -	\$ 184,889	\$ 184,889	0%
	97421	Modifications to reservoir to allow adequate water cycling within tank. This project required to return Reservoir 7 to operational status.	\$ -	\$ 153,732	\$ 153,732	0%
	98225	Pipeline Inspection Program - D-500 Pipeline starting from Reservoir 5 to the intersection of Palos Verdes Drive West and Via Rivera. (approx 3.0 miles). Project includes installation of 8 insertion/extraction ports at an average spacing 2000 linear ft. The project Scope also includes an inspection feasibility study, the non-	\$ 326,308	\$ 326,308	\$ -	100%
	99473	Relocate PRV D-21 @ Via Arriba in the Palos Verdes system. Relocation of PRV to resolve sanitary concerns. Possible upsize for improve fire flow in A-Cascade.	\$ 137,625	\$ 137,625	\$ -	100%
	122MRP16	The 2016 main replacement program will replace 14,124 feet of pipelines in the Palos Verdes district at an estimated cost of \$167 per foot.	\$ 461,216	\$ 3,516,449	\$ 3,055,233	13%
	97421	Modifications to reservoir to allow adequate water cycling within tank. This project required to return Reservoir 7 to operational status.	\$ -	\$ 9,742	\$ 9,742	0%
	98165	Hydrant Meter Reduced Pressure Principal Assembly	\$ 18,931	\$ 18,931	\$ -	100%
	99184	Install 1,000 AMR meters. Meters to be replaced are on 2 man read routes, driving routes, and routes requiring a 4th reader.	\$ -	\$ 353,455	\$ 353,455	0%
	PVD0900	Meter Replacement Program	\$ 114,575	\$ 23,596	\$ (90,979)	486%
	97421	Modifications to reservoir to allow adequate water cycling within tank. This project required to return Reservoir 7 to operational status.	\$ -	\$ 11,776	\$ 11,776	0%
	98225	Pipeline Inspection Program - D-500 Pipeline starting from Reservoir 5 to the intersection of Palos Verdes Drive West and Via Rivera. (approx 3.0 miles). Project includes installation of 8 insertion/extraction ports at an average spacing 2000 linear ft. The project Scope also includes an inspection feasibility study, the non-	\$ 94,210	\$ 94,210	\$ -	100%
	99388	Upgrade Fire Hydrants in Palos Verdes district	\$ 76,093	\$ 76,093	\$ -	100%
	98492	Replace Air Tools	\$ 18,720	\$ 18,720	\$ -	100%
	98496	Replace Air Tools	\$ 18,389	\$ 18,389	\$ -	100%
	98499	Replace hand tools	\$ 6,370	\$ 6,370	\$ -	100%
Specifics Total			\$1,551,064	\$ 6,105,109	\$ 4,554,045	25%
Non-Specifics Total			\$ -	\$ 1,338,000	\$ 1,338,000	0%
Carry-Overs Total			\$ -	\$ 7,264,595	\$ 7,264,595	-
TOTAL 2016			\$1,551,064	\$14,707,704	\$13,156,640	11%

2

1

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99080	Installation of Pump Shelter	\$ 17,296	\$ 17,296	\$ -	100%
	97946	Improve overall structural integrity of the interior columns Sta.37 T1	\$ -	\$ 3,343,546		
	98140	Replacement of pump and motor.	\$ 53,922	\$ 53,922		
	98142	Replacement of pump and motor.	\$ 70,143	\$ 70,143		
	98149	Replacement of pump and motor.	\$ 53,922	\$ 53,922		
	98618	Replacement of 7 control valves in Palos Verdes. Location: 122_000_CV041, 122_000_CV045, 122_000_CV046, 122_000_CV054,	\$ 209,985	\$ 209,985		
	98229	Pipeline Inspection Program - Ridge Supply Pipeline (1.0 miles) starting from Station 23 to Station 49. Project includes installation of 4 insertion/extraction ports at an average spacing 1000 linear ft. The project Scope also includes an inspection feasibility study, the non-destructive inspection service and report	\$ 214,051	\$ 214,051		
	122MRP17	The 2017 main replacement program will replace 14,124 feet of pipelines in the Palos Verdes district at an estimated cost of \$167 per foot.	\$ 472,747	\$ 3,604,360		
	99185	Install 1,000 AMR meters. Meters to be replaced are on 2 man read routes, driving routes, and routes requiring a 4th reader.	\$ -	\$ 362,291		
	PVD0900	Meter Replacement Program	\$ 117,279	\$ 24,186		
	98229	Pipeline Inspection Program - Ridge Supply Pipeline (1.0 miles) starting from Station 23 to Station 49. Project includes installation of 4 insertion/extraction ports at an average spacing 1000 linear ft. The project Scope also includes an inspection feasibility study, the non-destructive inspection service and report	\$ 48,283	\$ 48,283	\$ -	100%
	99394	Upgrade Fire Hydrants in the Palos Verdes district.	\$ 81,468	\$ 81,468	\$ -	100%
Specifics Total			\$1,339,095	\$ 8,083,452	\$ 6,744,357	17%
Non-Specifics Total			\$ -	\$ 892,800	\$ 892,800	0%
Carry-Overs Total			\$ -	\$ 576,900	\$ 576,900	0%
TOTAL 2017			\$1,339,095	\$ 9,553,152	\$ 8,214,057	14%

2

1

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98227	2.5MG storage deficit identified in P-Cascade. Cost will include feasibility study, identify potential site, due diligence (geotechnical, environmental, zoning, preliminary desing) and property purchase.	\$ -	\$ 7,292,324	\$ 7,292,324	0%
	98326	Install 5,000' of 24" and 18,000' of 30" Pipeline and Pump Station. This project, together with WO 98328, are collectively known as the Palos Verdes Pipeline	\$ -	\$ 2,993,316	\$ 2,993,316	0%
	99078	Installation of Pump Shelter	\$ 51,581	\$ 51,581	\$ -	100%
	99079	Installation of Pump Shelter	\$ 51,581	\$ 51,581	\$ -	100%
	97563	Distribution system modifications to allow adequate water cycling within tank and return Reservoir 11 to operational status.	\$ -	\$ 19,889	\$ 19,889	0%
	97947	Install new interior ladder and new exterior ladder at Station 046-T1 and CWS standard anticlimb on the exterior ladders at Sation 046-T1 and 048-T1.	\$ 44,859	\$ 44,859	\$ -	100%
	98230	Add a flexible connection (EBBA Flex Tend) to the inlet/outlet pipe of Palos Verdes Reservoir 26, an existing 50,000 gallon above ground welded steel tank	\$ 90,639	\$ 90,639	\$ -	100%
	98144	Replacement of pump and motor.	\$ -	\$ 250,741	\$ 250,741	0%
	98156	Replacement of pump and motor.	\$ -	\$ 200,852	\$ 200,852	0%
	98326	Install 5,000' of 24" and 18,000' of 30" Pipeline and Pump Station. This project, together with WO 98328, are collectively known as the Palos Verdes Pipeline	\$ -	\$10,124,431	\$10,124,431	0%
	98620	Replacement of 6 control valves in Palos Verdes. Location: 122_000_CV079, 122_000_CV080, 122_000_CV084, 122_000_CV088,	\$ 184,487	\$ 184,487	\$ -	100%
	99181	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware	\$ -	\$ 358,177	\$ 358,177	0%
	97563	Distribution system modifications to allow adequate water cycling within tank and return Reservoir 11 to operational status.	\$ -	\$ 433,668	\$ 433,668	0%
	98237	Pipeline Inspection Program (2.5 miles) - Ridge pipeline from Station 49 to Station 37. Project includes installation of 4 insertion/extraction ports at an average spacing 3000 linear ft. The project Scope also includes an inspection feasibility study, the non-destructive inspection service and report writing.	\$ 305,422	\$ 305,422	\$ -	100%
	98326	Install 5,000' of 24" and 18,000' of 30" Pipeline and Pump Station. This project, together with WO 98328, are collectively known as the Palos Verdes Pipeline	\$ -	\$27,778,048	\$27,778,048	0%
	98328	Install 13,000 ft of 24inch pipeline from Station 15 to Crenshaw Blvd. This project, together with WO 98326, are collectively known as Palos Verdes Pipeline	\$ -	\$14,521,807	\$14,521,807	0%
	122MRP18	The 2018 main replacement program will replace 14,124 feet of pipelines in the Palos Verdes district at an estimated cost of \$167 per foot.	\$ 484,566	\$ 3,694,469	\$ 3,209,903	13%
	97563	Distribution system modifications to allow adequate water cycling within tank and return Reservoir 11 to operational status.	\$ -	\$ 27,363	\$ 27,363	0%
	99186	Install 1,000 AMR meters. Meters to be replaced are on 2 man read routes, driving routes, and routes requiring a 4th reader.	\$ -	\$ 371,349	\$ 371,349	0%
	PVD0900	Meter Replacement Program	\$ 119,953	\$ 24,791	\$ (95,162)	484%
	97563	Distribution system modifications to allow adequate water cycling within tank and return Reservoir 11 to operational status.	\$ 12,222	\$ 12,222	\$ -	100%
	98237	Pipeline Inspection Program (2.5 miles) - Ridge pipeline from Station 49 to Station 37. Project includes installation of 4 insertion/extraction ports at an average spacing 3000 linear ft. The project Scope also includes an inspection feasibility study, the non-destructive inspection service and report writing.	\$ 49,490	\$ 49,490	\$ -	100%
	99396	Upgrade Fire Hydrants in the Palos Verdes district.	\$ 89,745	\$ 89,745	\$ -	100%
Specifics Total			\$1,484,544	\$68,971,250	\$67,486,705	2%
Non-Specifics Total			\$ -	\$ 913,200	\$ 913,200	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2018			\$1,484,544	\$69,884,450	\$68,399,905	2%

2

3

C. DISCUSSION

The Palos Verdes District recorded \$2,995,500 per year in average gross plant additions for the most recent six-year period 2009-2014.¹⁰⁸ **Table 7-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

Table 7-C: Capital Budget Summary vs. Recorded Expenditures– Palos Verdes District

Palos Verdes (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 2,995.5	100%
ORA	\$ 4,535.3	\$ 1,551.1	\$ 1,339.1	\$ 1,484.5	\$ 2,227.5	74%
CWS	\$ 15,810.1	\$ 14,707.7	\$ 9,553.2	\$ 69,884.4	\$ 27,488.9	918%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific budgets (Section 2), and 2015 Capital Budget (Section 3) below.

1. **Specific Projects**

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Pipeline Replacement Program (PID 99352, 99353 & 99354)

In the Palos Verdes District, CWS requests approximately \$3.5 million to replace 14,124 feet of pipeline per year between 2016 and 2018. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues

¹⁰⁸ Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

Testimony (see ORA’s Report on Plant – Common Issues). **Table 7-D** below shows ORA’s recommendations for pipeline replacement and the associated budgets in this district.

Table 7-D: Pipeline Replacement Requests – Palos Verdes

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	99352	1,853	\$ 461,216	14,124	\$ 3,516,449
2017	99353	1,853	\$ 472,747	14,124	\$ 3,604,360
2018	99354	1,853	\$ 484,566	14,124	\$ 3,694,469

b. Advanced Metering Infrastructure (AMI) (PIDs 99184, 99185 & 99186)

CWS requests \$353,455 in 2016, \$362,291 in 2017 and \$371,349 in 2018 to replace the district’s small meters which are due for replacement because of age with AMR meters. The proposed projects would replace 1,000 per year. CWS’s main reason for this request is public and employee safety. CWS’s project justification states the following:

The starting and stopping of the utility vehicle and an employee entering and exiting the vehicle in public roadways to obtain a visual meter read causes significant safety hazards to the public and to the utility employees.

CWS has read meters in this area successfully up until now, and without AMR. The company did not provide any incident records or any other documentation supporting claimed safety concerns. For this reason and the additional reasons presented in ORA’s AMR/AMI testimony (see ORA’s Report on Plant – Commission Issues), ORA recommends that the Commission disallows this project.

c. Meter Replacement Program (PID PVD900)

CWS requests \$23,596 in 2016, \$24,186 in 2017 and \$24,791 in 2018 to replace the meters in Palos Verdes District. CWS requested the above AMR Meter Installation project to replace the district’s small meters that are due for replacement in accordance with GO 103A requirements. Because ORA is recommending disallowance of the AMR installation project, PID PVD900 should be adjusted to include analog small meter

replacements. ORA recommends the Commission allow the following budget for PID DOM900.

Table 7-E: Meter Replacement Budget – Palos Verdes District

District:	Palos Verdes		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 114,575	\$ 23,596
2017	0900	\$ 117,279	\$ 24,186
2018	0900	\$ 119,953	\$ 24,791

ORA's recommendation is based on CWS's historical meter replacement budget (six-year average from 2009 to 2014). ORA's recommended budgets are based on detailed analysis and recommendation in its Report on Plant - Common Issues.

d. Generator Replacement – PV Station 38 (PID 99480)

CWS requests \$184,889 in 2016 to replace the existing diesel generator and transfer switch at the Palos Verdes Station 38 but CWS did not provide any discussion on why the transfer switch is needed. Also, CWS requests to construct a new foundation for the new generator as well as new underground electrical conduits. According to the project justification, CWS provides the following list of reasons to support its requested generator replacement:¹⁰⁹

- The engine has failed to start on numerous occasions over the past decade,
- Multiple oil leaks have occurred over the past decade,
- Replacement parts for the engine are difficult to obtain due to its age,
- Maintenance cost continue to increase due to frequent necessary repairs,
- The age of the unit.

¹⁰⁹ CWS Palos Verdes Project Justification, p. PV PJ-225.

1 When ORA asked CWS to provide records to show the engine had failed to start over the
2 past decade, CWS provided, in its response to ORA Data Request BYU-006, only one
3 record of a work order created in 2013. CWS provided a “snap-shot” of its Work Order
4 Tracking (not a vendor invoice) which only described “Trouble shoot Generator Not
5 starting” for the work order without any details other than the duration was 6 hours.
6 CWS did not provide any other records to show (other than the work order created in
7 2013) the generator has failed to start. CWS failed to substantiate its claim that the
8 engine had failed “numerous times” over the past decade.

9 When ORA asked CWS to provide information for each oil leak that hindered the normal
10 operation of the engine, CWS provided only one invoice from a vendor who repaired a
11 coolant leak, not an oil leak.¹¹⁰ CWS failed to verify its claim that multiple oil leaks
12 occurred over the past decade.

13 When ORA asked CWS to provide evidence to show that replacement parts are difficult
14 to obtain due to the generator’s age, CWS could not provide any evidence but stated “the
15 comment made in the project justification was based on a verbal conversation with the
16 maintenance provider.”¹¹¹ CWS failed to properly document and substantiate its claim
17 on any of the reasons it listed that requires replacement of the generator.

18 ORA asked CWS to provide evidence to show the maintenance cost continues to increase
19 due to frequent repairs and maintenance for the engine. CWS provided the following:¹¹²

- 20 • Attachment BYU-006, Q.2d

¹¹⁰ CWS response to ORA Data Request BYU-006, Question 2.b.

¹¹¹ CWS response to ORA Data Request BYU-006, Question 2.c.

¹¹² CWS response to ORA Data Request BYU-006, Attachments BYU-006 Q.2d and Q.2d-1.

- Page 1: Preventive Maintenance Checklist from United Power Generation's invoice #1825 in the amount of \$734 dated May 17, 2010,
- Page 2: United Power Generation's invoice #3578 in the amount of \$1,202.36 for a repair occurred on October 2, 2013,
- Page 3: United Power Generation's invoice #2904 in the amount of \$3,079.61 for a repair occurred on December 28, 2011.
- Attachment BYU-006, Q.2d-1
 - Pages 1 – 3: Predictive Maintenance Auxiliary Power System Test Report from Power Services, Inc. dated April 26, 2005 (with no cost info),
 - Page 4: Field Service Report from Cummins Cal Pacific dated March 28, 2007 (with no cost info),
 - Page 5: Planned Maintenance Agreement Checklist from Cummins Cal Pacific dated March 28, 2007 (with no cost info),
 - Page 6: A duplicate of page 5 with more notes on it (with no cost info),
 - Page 7: A duplicate of Page 4 with less notes on it (with no cost info),
 - Page 8 – 9: Invoice from Cummins Cal Pacific dated March 31, 2007 in the amount of \$694,
 - Page 10: Preventive Maintenance Checklist from United Power Generation dated July 9, 2009 in the amount of \$734.80,
 - Page 11: Generator Service Quote from United Power Generation dated April 13, 2009 with a quoted amount of \$734.80,
 - Page 12: Generator Service Quote from United Power Generation dated July 23, 2009 with a quoted amount of \$1,968.

1 In the attachments included in CWS's Data Request response, CWS provided two repair
2 records from 2011 and 2013 (Invoice #2904, \$3,709.61; Invoice #3578, \$1,202.36)¹¹³ and
3 three preventive maintenance records from 2005, 2007 and 2009.¹¹⁴ ORA's request was
4 for CWS to substantiate its own claim in the project justification about maintenance cost
5 continue to increase due to frequent repairs. CWS stated that it has been spending about
6 \$700 per year for preventive maintenance before the repairs in 2011 and 2013.¹¹⁵
7 Contrary to CWS's statement, the records provided show that preventive maintenance
8 was done biannually. Also, invoice #2904 was about the repair of the engine's cooling
9 system (water pump, thermostat, belts, valve, etc.) and invoice #3578 was the repair on
10 the electronics of the engine (24 VDC Main PCB). These were two different areas of the
11 engine that required repairs and does not justify the basis for CWS's claim of "continued
12 increase" in maintenance cost. Additionally, comparing preventive maintenance with
13 repair should not be considered as the basis for the continued increase of maintenance
14 cost because preventive maintenance is done regardless of the engine's condition. CWS
15 failed to support its own claim that maintenance costs continues to increase due to
16 "frequent" repairs; it only provided two repair records. Considering the project cost
17 estimate of over \$180,000, the maintenance cost is minimal.

18 Finally, according to CWS's maintenance records, the generator's engine was
19 manufactured by Komatsu in 1987. ORA thoroughly searched through CWS's
20 maintenance records but could not find any information regarding the age of the
21 generator's engine that requires a replacement. Also, none of the maintenance records
22 showed the maintenance provider's difficulties in finding parts or difficulties in

¹¹³ CWS response to ORA Data Request BYU-006, Attachment BYU-006 Q.2d.

¹¹⁴ CWS response to ORA Data Request BYU-006, Attachment BYU-006 Q.2d-1.

¹¹⁵ CWS response to ORA Data Request BYU-006, Q.2d,

1 performing repairs due to the generator's age. Therefore, for the reasons discussed
2 above, ORA recommends the Commission disallow CWS's request.

3 *e. Control Valve Replacement (PIDs 98616, 98618 & 98620)*

4 CWS requests \$204,863 in 2016, \$209,985 in 2017 and \$184,487 in 2018 to replace
5 control valves older than 30 years including replacement of damaged or undersized
6 vaults. CWS proposes to replace seven 8-inch valves in 2016, seven 8-inch valves in
7 2017 and six 8-inch valves in 2018. As it was presented in ORA's Report on Plant –
8 Common Issues, ORA makes the following recommendations to the Commission:

- 9 • Adjust PID 98616 from \$204,863 to \$117,065,
10 • Allow PIDs 98618 and 98620 as requested.

11 *f. Pump and Motor Replacement (PIDs 98133, 98144 & 98156)*

12 CWS requests \$191,174 in 2016, \$250,741 in 2018 and \$200,852 in 2018 to replace
13 pumps and motors at PV 023-D, PV 023-G and PV 022-B, respectively. According to
14 CWS's project justification, this project is a routine replacement.¹¹⁶

15 CWS considered Pump Efficiency, Pump Annual Run Hours and Asset Criticality as the
16 basis for selecting the above pumps for replacements.¹¹⁷ Also, the project justification
17 states that pumps at Stations 22 and 23 were selected to ensure parts are interchangeable
18 between all pumps.

¹¹⁶ CWS Palos Verdes Project Justifications, p. PV PJ-236.

¹¹⁷ CWS Palos Verdes Project Justifications, p. PV PJ-237.

1 The pump test results for the above pumps are as follows:¹¹⁸

- 2 • PV 022-B: (2010) Efficiency = 62.7%, Rating = Fair
- 3 (2012) Efficiency = 68.3%, Rating = Good
- 4 (2014) Efficiency = 61.0%, Rating = Fair
- 5 • PV 23-D: (2010) Efficiency = 78.6%, Rating = Very Good
- 6 (2012) Efficiency = 54.3%, Rating = Low
- 7 (2014) Efficiency = 78.3%, Rating = Very Good
- 8 • PV 23-G: (2010) Efficiency = 75.2%, Rating = Very Good
- 9 (2012) Efficiency = 66.9%, Rating = Good
- 10 (2014) Efficiency = 79.1%, Rating = Very Good

11 As shown above, CWS requests to replace pumps that are rated “Good” to “Very Good.”
12 There are other pumps that show lower ratings than the above pumps.¹¹⁹ If authorized,
13 CWS would replace pumps with Good to Very Good efficiency ratings which are neither
14 needed nor prudent at this time. For the reasons discussed above and in ORA’s Report
15 on Plant – Common Issues, ORA recommends that the Commission disallow the Pump
16 and Motor Replacement request in the Palos Verdes District.

17 *g. Station 4 Pump Replacement (PID 98224)*

18 CWS requests \$583,146 in 2016 to replace the existing two booster pumps (4A and 4C)
19 at Station 4. CWS’s project justification states the pump replacement is based on CWS’s
20 “firm capacity” analysis of the system. Firm capacity analysis means, assuming the

¹¹⁸ CWS response to ORA Data Request DG-024, attachment DG-024-2-a.

¹¹⁹ CWS data request response attachment DG-024-2-a.

1 largest source (in this case pump 4A with 1,200 gpm capacity) is off-line, and determine
2 if the system would still be able to meet the system's demand. According to the project
3 justification, the two pumps serve Zone J-600 that has the Maximum Day Demand
4 (MDD) of 1,400 gpm. Pump 4C's capacity is 750 gpm according to the project
5 justification. The project justification further states the two pumps' actual capacity are
6 much lower than their design capacities: 1,000 gpm and 720 gpm current capacities for
7 A and C, respectively.

8 Contrary to CWS's claim of MDD in the project justification, CWS's response to ORA
9 Data Request BYU-009, Attachment Q1, indicates Zone J-600 has MDD of 1,230 gpm in
10 2014; 1,217 gpm in 2013; 1,182 gpm in 2012; 1,148 gpm in 2011; and 1,152 gpm in
11 2010. ORA used 2013 number because the current Drought Mandate requires 36%
12 reduction from 2013 demands as basis for the current demand.¹²⁰ According to the State
13 Water Resources Control Board, CWS's Palos Verdes achieved 29.5% of cumulative
14 savings by November 2015 as compared to 2013.¹²¹ 29.5% reduction from 1,217 gpm
15 would be 858 gpm. With the existing capacities from the boosters 4A and 4C, the MDD
16 of Zone J-600 can easily be met. Nevertheless, the existing capacity of boosters 4A and
17 4C (total of 1,720 gpm) is sufficient to meet 2014 MDD of 1,230 gpm (highest in the past
18 5 years). With continued emphasis on conservation even after the eventual lifting of
19 mandatory Drought Mandate reductions the existing capacities of these pumps should be
20 sufficient to meet MDD.

21 CWS requests replacement of the existing pumps with higher capacity pumps because of
22 "firm capacity" issues. CWS intends to apply the firm capacity analysis to Station 4
23 pumps. However, firm capacity is not a requirement from any State regulatory

¹²⁰ 36% is the target savings for the Palos Verdes District.

¹²¹ November 2015 Water Conservation Report by Supplier, p. 11.

1 authorities. As shown in the table below, pumps 4A and 4C are rated “Very Good” and
2 ORA disagrees with CWS’s request of replacing efficient pumps.

3 CWS provided the following efficiency ratings for Pumps A and C:¹²²

4 **Table 7-F: Station 4 Pump Efficiency**

Test Date	Pump Name	Motor Horse Power	Overall Plant Efficiency	Efficiency Rating
12/1/2010	PV 004 A	60	65	GOOD
12/1/2010	PV 004 C	40	0	VERY LOW
11/15/2012	PV 004 A	60	70.1%	VERY GOOD
11/15/2012	PV 004 C	40	74.6%	VERY GOOD
11/19/2014	PV 004 A	60	66.8%	VERY GOOD
11/19/2014	PV 004 C	40	65.1%	VERY GOOD
8/3/2015	PV 004 A	60	69.2%	VERY GOOD
8/3/2015	PV 004 C	40	69.4%	VERY GOOD

5 Again, ORA opposes replacing efficient pumps, and recommends that the Commission
6 disallow CWS’s request.

7 ***h. Replace SCADA Software and Hardware (PID 99174)***

8 CWS requests \$358,177 in 2017 to replace the SCADA software and hardware at the
9 Palos Verdes District. CWS’s project justification states that the requested project is in
10 the district’s SCADA implementation phase once the General Office SCADA project
11 (PID 99272) develops the basic modules to build the enterprise SCADA system. As
12 discussed in Report on Plant - General Office and Report on Plant - Common Issues,
13 ORA recommends that the Commission disallow the Palos Verdes District’s SCADA
14 Software and Hardware project.

¹²² CWS response to ORA Data Request DG-024.

1 *i. Reservoir 7 Restoration – PV Station 43 (PID 97421)*

2 CWS requests \$189,329 in 2016 to modify the existing distribution system at Zones L-
3 700 and L-625 to allow adequate water cycling within the existing Station 43, Tank 1
4 (Reservoir 7, with capacity of 100,000 gallons). According to the project justification,
5 Reservoir 7 has been off line since 2008 due to nitrification issues. The cause of the
6 nitrification was due to the water inside the Reservoir 7 becoming stagnant. The cause of
7 the stagnant water was due to the system's (Zone L-700) hydraulic grade line becoming
8 higher (at 700 ft.) than the Reservoir 7's operating hydraulic grade line of 625 ft.: system
9 pressure is higher than the tank pressure. The project justification describes the common
10 inlet/outlet of the tank makes it difficult for the water to cycle in and out of the tanks
11 because of the above mentioned pressure differences.

12 CWS plans to transfer 35 customers from the L-625 Zone to L-700 Zone and make
13 necessary pipeline modifications in the zones to reactivate the Reservoir 7 to serve L-625
14 Zone only.¹²³

15 CWS's main reason behind this project request is that CWS claims the Palos Verdes
16 system has an overall storage deficit. Specifically, the project justification page PV PJ-
17 271 states the overall deficit is 10 MG. Reservoir 7 is located in Zone L-700 and L-625.
18 According to the information provided in CWS's response to ORA Data Request BYU-
19 009, these two zones belong to P-Cascade system.¹²⁴ From the data found on the project

¹²³ CWS response to ORA Data Request BYU-006, Q.4.c.

¹²⁴ According to CWS Palos Verdes Water Supply and Facilities Master Plan, p. 12-1, CWS subdivides Palos Verdes District's pressure zone into the following sub areas:

- D-500 Cascade (D-Cascade) consisting of the area served by Reservoirs 1 and 5 (Zone D-500 and other zones served through PRVs from D-500)'

1 justification page PV PJ-377 and applying the correct formula for the numbers, ORA
2 found that the P-Cascade system does not have storage deficit. A more detailed
3 discussion on the system storage will be found in the P-Cascade Feasibility Study Project
4 section below. CWS stated it could not provide evidence that storage is specifically
5 needed in the L-625 Zone which Reservoir 7 will serve.¹²⁵ The same response also states
6 reactivating Reservoir 7 will reduce the overall storage deficit in the Palos Verdes
7 system. Adding a storage volume to a system (P-Cascade) that does not have storage
8 deficit would not be able to achieve reduction in overall storage deficit. For these
9 reasons, ORA finds there is no need for this project, and therefore, recommends the
10 Commission disallow this project request.

11 ***j. PV Station 37 T1 Tank Structural Improvement (PIDs 97946, 97948 & 97600)***

12 CWS requests \$59,859 in 2016 (PID 97948) for conducting an investigation on the
13 structural integrity of PV Station 37 – T1’s roof, columns, shell and floor; and develop a
14 scope of work for PID 97946. CWS also requests \$3,343,546 in 2017 (PID 97946) to
15 make structural improvements to Station 37 – T1 reservoir. CWS also requests
16 \$1,150,658 in 2017 (PID 97600), in Expenses, to install concrete coating/liner.

-
- Zone J-600: area served by Reservoirs 2 and 8;
 - C-850 Cascade (C-Cascade) consisting of the area served by Reservoir 19 (Zone C-850 and other pressure zones served through PRVs from C-850); and
 - P-1450 Cascade (P-Cascade) consisting of the area served by Reservoir 20 (Zone P-1450 and other pressure zones and reservoirs served through PRVs from P-1450).

¹²⁵ CWS response to ORA Data Request BYU-006, Question 4.b.

CWS's project justification provides a field report completed by Rubicon Applied Divers on January 2, 2014. The report makes the following recommendations and conclusion:¹²⁶

Recommendations:

1. Continue current cleaning and inspection practices,
2. Install weather stripping on the entry hatch edge to prevent small critters and insects from entering the reservoir,
3. Have the columns of the reservoir inspected by an engineer to evaluate the heavy amount of cracking.

Conclusion:

Based upon the results of the underwater inspection, it appears that the tank is in fully operational condition and should continue to provide potable water with proper maintenance.

The inspection report did not recommend any structural improvement or repairs, but stated the reservoir is in a fully operational condition. The inspection report found:

- Only one of the entry hatches is missing the weather stripping (South West entry hatch).¹²⁷
- The conditions of the hatches, access ports, vents, interior ladder, telemetry float, reservoir water outlet, reservoir floor, interior wall, and ceiling to be in good conditions.¹²⁸
- The conditions of the reservoir water outlet actuator and its frame, and 20-inch capped-off penetration, to be in fair conditions.
- The conditions of the reservoir water inlet and 12 columns (out of 84 columns) to be in poor conditions.

¹²⁶ CWS Palos Verdes Project Justifications, page PV PJ-289.

¹²⁷ CWS Palos Verdes Project Justifications, page PV PJ-291.

¹²⁸ CWS Palos Verdes Project Justifications, page PV PJ-291 – 307.

1 CWS's own evidence provided in the project justification (Field Inspection Report by
2 Rubicon) lacks the support for the proposed structural improvements to PV Station 37 –
3 T1 reservoir. For example, CWS has not had the reservoir inspected by an engineer to
4 evaluate the heavy amount of cracking which would provide any analysis or engineering
5 recommendations for structural improvements. ORA determined that CWS's requested
6 structural improvement (over \$3.3 million) is not required at this time, especially, when
7 the result of the underwater inspection reported that the reservoir is in operational
8 condition. However, based on the poor conditions of certain areas of the reservoir noted
9 in the inspection report, ORA agrees that there's a need to investigate on the conditions
10 of the reservoir's structure especially the columns. Therefore, ORA recommends the
11 Commission:

- 12 • Authorize PID 97948 (\$59,859) for CWS to investigate the structural integrity of
13 the reservoir and develop a clear work scope if necessary.
- 14 • Reject PID 97946 since the request lacks proof of evidence for the need.
- 15 • Reject PID 97600 and remove it from the requested expenses.

16 *k. Reservoir 11 Restoration – PV Station 45 (PID 97563)*

17 CWS requests \$493,141 in 2018 to modify the existing distribution system to allow
18 adequate water cycling within the existing Station 45, Tank 1 (Reservoir 11, 100,000
19 gallons). According to the project justification, Reservoir 11 has been off line since 2009
20 due to nitrification issues. The cause of the nitrification was the water inside the
21 Reservoir 11 becoming stagnant. The cause of the stagnant water was due to the
22 system's (Zone B-550) hydraulic grade line becoming higher (at 550 ft.) than the
23 Reservoir 11's operating hydraulic grade line of 495 ft.: system pressure is higher than
24 the tank pressure. The project justification describes the common inlet/outlet of the tank

1 makes it difficult for the water to cycle in and out of the tanks because the above
2 mentioned pressure differences.

3 CWS plans to transfer 8 customers from the B-550-2 Zone (currently has 49 customers)
4 to B-690 Zone and make necessary pipeline modifications in the zones to reactive the
5 Reservoir 11 to serve B-550-2 Zone only.^{129,130}

6 CWS's main reason behind this project request is that CWS claims the Palos Verdes
7 system has an overall storage deficit. Specifically, the project justification on page PV
8 PJ-346 states the overall deficit is 10 MG. Reservoir 11 is located in the B-550-2 Zone.
9 According to the information provided in CWS's response to ORA Data Request BYU-
10 009, Zone B-550-2 belongs to P-Cascade system.¹³¹ From the data found on the project
11 justification page PV PJ-377 and applying the correct formula for the numbers, ORA
12 found that the P-Cascade system does not have storage deficit. A more detailed
13 discussion will be found in the P-Cascade Feasibility Study Project section below. CWS
14 stated it could not provide evidence that storage is specifically needed in the B-550-2
15 Zone which Reservoir 11 will serve.¹³² The same response also states reactivating
16 Reservoir 11 will reduce the overall storage deficit in the Palos Verdes system. Adding a
17 storage volume to a system (P-Cascade) that does not have storage deficit wouldn't be

¹²⁹ CWS response to ORA Data Request BYU-006, Question 6.c.

¹³⁰ CWS project justification refers to B-550 Zone. CWS's response to ORA Data Request BYU-006 refers to B-550-2 Zone. ORA's review of CWS's Palos Verdes Water System and Distribution Map found that Reservoir 11 is located in B-550-2 Zone and the map's topography indicates that there are low elevation area in B-550-2 Zone.

¹³¹ According to the information provided in the same data request response, B-550, B550-2, and B690 zones all belong to the P-Cascade system.

¹³² CWS response to ORA Data Request BYU-006, Question 6.b.

1 able to achieve reduction in overall storage deficit. ORA finds there is no need for this
2 project, and therefore, recommends that the Commission disallow this project request.

3 *1. P-Cascade Feasibility Study (PID 98227)*

4 CWS requests \$7,292,324 in 2018 to conduct a tank site alternatives evaluation,
5 geotechnical and due diligence activities, preliminary design and property purchase for a
6 new 2.5 MG storage tank. According to CWS's project justification, the construction of
7 the new storage tank will be "funded under a separate 2019 project to be filed in the 2018
8 GRC." Here, ORA believes CWS actually meant the new storage tank will be funded
9 under a separate 2019 project to be filed in 2018 for the next GRC with test year 2020.

10 Contrary to the project name of "Feasibility Study," CWS is actually requesting an
11 authorization of a design build project. According to CWS, the storage tank site will only
12 be identified after the first phase of the requested project which is the tank site
13 alternatives evaluation study has been completed.¹³³ That means CWS is taking a chance
14 of finding a suitable location for the proposed storage tank not knowing whether there are
15 land parcels available. Also, the cost of property purchase in Palos Verdes is uncertain.
16 During the previous 2012 GRC filing, CWS budgeted \$5,815,000 for a property purchase
17 and due diligence activities (PID 76174, Schultz Property), but the property owner
18 appraised the property value subsequent to the GRC filing and CWS had to adjust the
19 project cost to \$8,624,000.¹³⁴ This problem becomes more evident in the project
20 alternative chosen (Alternative 3, Add storage in Palos Verdes) in the project justification
21 which states:

¹³³ CWS response to ORA Data Request BYU-006, Question 8.a

¹³⁴ A.12-07-007 "Settlement Document," page 300.

1 Property that can accommodate a tank is limited on the peninsula and cost of such
2 property is high in this system. Use of existing property will be explored where
3 feasible.¹³⁵

4 Also, evaluating a new site or utilizing the existing CWS's property will be a part of the
5 alternatives evaluation study.¹³⁶ That means if the proposed study identified utilizing
6 CWS's existing property as a preferred alternative, then the requested project cost,
7 especially the property purchase, may become unnecessary.

8 CWS requests this additional storage tank project based on the storage deficit it had
9 identified in 2014 storage evaluation. According to CWS's project justification, the
10 required storage is the sum of the following:

- 11 • Operational Storage = 25% of MDD
- 12 • Emergency Storage = 100% of ADD
- 13 • Fire Flow Storage = greatest fire flow and duration of the zone or system.

14 CWS provided 2014 storage analysis as the basis of requesting a new 2.5 million gallon
15 reservoir in Attachment B to the project justification. According to Attachment B, the
16 2014 storage deficit in P-Cascade system is 2.15 MG. CWS assumed the total storage
17 needed to be 24.87 MG and subtracted the existing storage of 22.72 MG to estimate the
18 storage deficit of 2.15 MG. ORA found an error in CWS's calculation. According to
19 Attachment B, the ADD was 13.31 million gallons per day (MGD), and the MDD was
20 22.27 MGD. Since CWS did not use the fire flow requirement in calculating the storage
21 deficit, ORA will use the sum of Operational Storage and the Emergency Storage as a

¹³⁵ CWS Palos Verdes Project Justification, p. PV PJ-362.

¹³⁶ CWS response to ORA Data Request BYU-006, Question 8.a.

basis of calculating the required storage.¹³⁷ ORA's recalculated values for the required storage are as follows:

- Operational Storage @ 25% of MDD = 5.57 MG
- Emergency Storage @ 100% of ADD = 13.31 MG
- Total Storage Needed = 18.88 MG (this is smaller than the existing storage of 22.72 MG, thus, the system has enough storage.)

CWS's error in the calculation is that it summed the following: Operational Storage of 2.6 MG and the Emergency Storage of 22.27 MG. CWS used 19.5% of ADD as the Operational Storage and 100% of MDD as the Emergency Storage. Attachment B's analysis is not consistent with the criteria provided in the project justification.

Based on ORA's findings above, ORA recalculated the Total Storage Needed with the Fire Flow Requirement. According to Attachment B, Fire Reserve for P-Cascade system is 0.36 MG. Adding 0.36 MG to 18.88 MG of storage needed identified above would result in a Total Storage Needed with fire flow requirement of 19.24 MG which is still less than the existing storage of 22.72 MG.

ORA found the P-Cascade system has sufficient storage and recommends the Commission disallow CWS's request for additional storage in the P-Cascade system.

m. Crenshaw/Ridge Supply & D-500 Pipeline Project (PIDs 98326 & 98328)

CWS requests \$40,895,795 in 2018 to design and install a secondary transmission main (5,000 feet of 24-inch and 18,000 feet of 30-inch pipelines) and a pump station in the

¹³⁷ Palos Verdes Project Justification, page PV PJ-377, Attachment B, CWS used the Total Storage Needed "without Fire Requirement" as a basis for the total storage needed. CWS calculated 2.15 MG as 2014 Storage Deficit in P-Cascade and it is done by subtracting the Existing Storage (22.72 MG) from Total Storage Needed without Fire Requirement (24.87 MG)

1 Ridge System, and \$14,521,807 in 2018 to replace the existing 20-inch transmission main
2 from Station 15 to Crenshaw Boulevard with a 13,000 feet of 24-inch pipeline in the D-
3 500 System (Combined total of \$55.4 million in 2018). CWS's project justification
4 provides the following to describe the Ridge System and the D-500 System:

5 Hydraulically, the Palos Verdes water distribution system can be divided into two
6 main subsystems; the D-500 system, which supplies the lower elevations of the
7 system along the base of the peninsula (around the north and west sides) and the
8 Ridge System which supplies the remainder of the peninsula.

9 In 2012 GRC, the property purchase and due diligence activities for the pump station
10 included in the Crenshaw/Ridge Supply project (PID 98326) was agreed between ORA
11 and CWS as an advice letter filing (PID 76174 , \$5,814,595). CWS has not been able to
12 purchase a suitable property and hasn't been able to file the advice letter.¹³⁸

13 CWS's project justification provides the following reasons for the need of these projects:

14 *i. 27-inch Pipeline Vulnerability (Ridge System)*

15 CWS requests 18,000 feet of 30-inch pipeline and 5,000 feet of 24-inch pipeline to
16 connect pump stations 15 and 22 with Reservoir 25. Currently, Reservoir 25 is gravity
17 fed from Reservoir 20 which is located on the top of the hill. CWS is also proposing a
18 pump station between Reservoir 25 and Reservoir 20 to supply Reservoir 20 in case the
19 existing 27-inch pipeline between Reservoir 19 and Reservoir 20 becomes unavailable.
20 Currently, Reservoir 20 receives water from Reservoir 19 via pumping. ORA estimated
21 the existing pipeline length to be approximately 3,000 feet by measuring the pipeline
22 length on the Palos Verdes Water System Distribution and Zone Map according to the
23 map's scale. To provide redundant supply to Reservoir 20, CWS's request for a new
24 pipeline totaling 23,000 (18,000 ft. + 5,000 ft.) feet, and a new pump station.

¹³⁸ CWS response to ORA Data Request BYU-006, Question 8.c.

1 CWS argues that the existing alignment of the 27-inch pipeline between Reservoir 19 and
2 Reservoir 20 is extremely inaccessible for repair (if a failure occurs on the pipeline) due
3 to the terrain/topography of the alignment. CWS also argues that it has concerns of a
4 landslide in and around the 27-inch pipeline alignment and the Reservoir 19 site. CWS's
5 project justification did not provide convincing evidence to show that there is an
6 imminent danger of a land slide. Especially, CWS's concern of possible land slide is
7 based on the 1995 study.

8 In addition, a geotechnical investigation commissioned in 1995, verified the
9 presence of landslides mapped in and around the 27" pipeline and Reservoir 19
10 site. A map summarizing the findings of this investigation (areas identified as Rls
11 and Qls are recent and ancient landslides, respectively), along with a regional
12 geologic map that confirms the landslide areas, is provided in Exhibit G.¹³⁹

13 CWS provided a separate exhibit to supplement its project justification.¹⁴⁰ Page 288 of
14 the Palos Verdes Exhibits Book (Exhibit Book) is the Engineering Geologic Map for
15 Reservoir 19 facility dated July 1995 by William Cotton and Associates. On the map, it
16 only shows one area south of the Reservoir 19 to be Rls (recent landslide). There are two
17 areas marked as Qls (ancient landslides); one on the south of Reservoir 19 and one on the
18 east of the reservoir. There were no dates provided for how recent the Rls was. On the
19 Explanations section of the map, languages describing the landslide direction state the
20 following: "Margin of 1955 landslide taken from Quinton Engineers (1963)." Thus, the
21 information included in the map (especially the landslide) is from earlier than 1963. The
22 information provided by CWS is outdated. Also, this map does not show the location of
23 the 27-inch transmission pipeline, so, it is hard to tell whether the landslide occurred "in
24 and around" the pipeline. Nevertheless, this one page map (out of 599 pages of the
25 Exhibit Book) does not indicate whether the existing 27-inch pipeline or the Reservoir 19

¹³⁹ CWS Palos Verdes Project Justification PV PJ-413.

¹⁴⁰ CWS Palos Verdes Pipeline Project Exhibits Book (Exhibit Book).

1 site is vulnerable to landslides; the map simply documents landslides occurred a long
2 time ago. The Exhibit Book does not provide any information or discussion about the
3 landslide vulnerability elsewhere.

4 CWS's project justification states the existing 27-inch pipeline is also vulnerable to an
5 earthquake. If CWS fears the existing 27-inch pipeline is vulnerable to an earthquake, it
6 should also consider other pipelines throughout the Palos Verdes peninsula be vulnerable
7 to an earthquake. That means the proposed 30-inch and 24-inch new pipelines (23,000
8 feet in total length, going around the hills to provide redundancy to the existing 3,000 feet
9 of 27-inch pipeline) should also be vulnerable to an earthquake. CWS's claim of the
10 existing pipeline vulnerability lacks basis. As it was noted earlier, out of 599 pages of
11 Palos Verdes Pipeline Exhibits Book, only one page (a geological map of the past
12 landslides) refers to the existing Reservoir 19 (the existing 27-inch pipeline was not even
13 mentioned). CWS failed to meet its burden of proof that the existing pipeline is
14 vulnerable.

15 In this current GRC, CWS requests a pipeline inspection project for this 27-inch pipeline
16 between Reservoir 19 and 20 (Phase 2 of the Pipeline Inspection Project, PID 98229).
17 Instead of requesting over \$40 million project (23,000 feet of additional pipeline) based
18 on a study conducted 20 years ago with no findings of an impending danger, CWS should
19 commence the pipeline inspection program to better assess the current condition of the
20 pipeline to plan for the future options. If the inspection findings indicate the existing
21 pipeline is operational, there is no need to make improvements. Otherwise, the existing
22 pipeline can be rehabilitated, especially when the vulnerability issue has been found to be
23 non-existent.

1 The existing pipeline is a Cement Mortar Lined and Coated (CL&C) steel pipeline.¹⁴¹
2 According to the Palos Verdes Water System Distribution and Zone Map, the existing 27-
3 inch CL&C steel pipeline has Cathodic Protection installed. According to a study
4 conducted by the American Society of Civil Engineers (ASCE), CL&C steel pipeline
5 with cathodic protection would be considered to have “indefinite life” which means over
6 100 years of repair-free service life.¹⁴² According to CWS’s project justification, the
7 existing pipeline was constructed in 1956; therefore, it still has more than 40 years of
8 repair-free service life left.

9 *ii. Power Outages (Ridge System)*

10 CWS claims that it has concerns of power interruptions to the Ridge System’s key pump
11 stations. CWS’s project justification provides an example of power failure to Station 23
12 (Reservoir 19, Pump Station 23) caused by a widespread peninsula fire on August 27,
13 2009. CWS’s claim is absurd because Station 23 and Station 22 (another key pump
14 station for the Ridge System) were authorized to have an Emergency Backup Generator
15 in the previous 2012 GRC (PID 63358, \$936,309 for Station 22 Generator; and PID
16 63372, \$912,618 for Station 23 Generator). The other key pump stations, Station 15 and
17 Station 30 have generators in place. ORA finds power outage cannot be the reason for
18 the requested pipelines and pump station.

19 *iii. Storage Deficit (Ridge System)*

20 CWS claims its storage analysis that was re-evaluated in 2014 found the Ridge System
21 has 10 MG of storage deficit. ORA finds CWS’s claimed 10 MG storage deficit
22 erroneous because the Palos Verdes System Storage Analysis found on page PV PJ-377

¹⁴¹CWS Palos Verdes Project Justifications, p. PV PJ-413.

¹⁴² *How to Provide Indefinite Life for Municipal Metallic Transmission Pipelines*, Richard D. Mielke, P.E, M.ASCE, p. 8- 9.

1 of the project justification indicates otherwise. As it was previously mentioned in the P-
2 Cascade Feasibility Study Project above, the storage analysis applied the wrong criteria
3 (applying 100% of MDD instead of ADD for the Emergency Storage) which inflated the
4 required storage. However, even without making adjustments to the calculations by
5 using the correct criteria, the storage analysis shows C 850 (C-Cascade served by
6 Reservoir 19) has existing storage capacity of 6.0 MG, but the required storage was
7 calculated to be 4.59 MG. C-Cascade system does not have storage deficit. Another area
8 of the Ridge system is P-Cascade system. As it was previously discussed in the P-
9 Cascade Feasibility Study Project above, P-Cascade system does not have storage deficit
10 either. Therefore, ORA concludes that the Ridge System does not have storage deficit
11 based on the data provided in CWS's project justification.

12 *iv. Supply Inefficiency (Ridge System)*

13 According to CWS's project justification, the current supply transmission network of the
14 Palos Verdes system pumps water to the highest point of the system and gravity feeds
15 down the lower elevation zones. CWS claims that the proposed pipeline and pump
16 station project would enable CWS to save energy cost by \$70,000 annually. This saving
17 becomes miniscule when compared with the Ridge System pipeline project's hefty \$40.9
18 million construction cost. The first year revenue requirement alone would be over \$5
19 million.¹⁴³ ORA finds the supply inefficiency is not a good reason for the project request.

20 *v. 20-inch Transmission Main – Access, Reliability and Liability Concerns (D-*
21 *500 System)*

22 CWS's project justification states that its Water Supply and Facilities Master Plan
23 "identified" the need to "replace" the 60 year old steel pipeline feeding the D-500

¹⁴³ Revenue Requirement = [Project Cost (\$40.9 million) x Rate of Return (7.94%) x Net to Gross Multiplier (1.35747)] + [Project Cost (\$40.9 million) x Depreciation Rate (2.23%)] = \$5.3 million.

1 system.¹⁴⁴ As it was previously discussed in the 27-inch Pipeline Vulnerability section
2 above, CL&C steel pipeline with cathodic protection can have indefinite service life.
3 CWS also has concerns that the existing pipeline alignment is hard to access and any
4 failure to the pipeline might damage the adjacent properties. Instead of asking for
5 replacing a pipeline that has indefinite service life without any evidence of the condition
6 of the existing pipeline, CWS should assess the condition of the existing pipeline first.

7 CWS is requesting a series of pipeline inspection project (Phases 1, 2 and 3 over 3 years)
8 from where the proposed pipeline replacement (PID 98328) ends. Instead of considering
9 \$14.5 million pipeline replacement project, ORA recommends that the Commission
10 require CWS to inspect the pipeline first to assess the condition of it in the next GRC
11 before authorizing such a costly project.

12 In summary, CWS failed to provide convincing evidence to substantiate its own reasons
13 provided in the project justification: pipeline vulnerability could not be verified, power
14 outage issue has been addressed in the previous GRC, storage deficit is non-existent,
15 supply inefficiency is minimal, and D-500 pipeline should be inspected first. Therefore,
16 ORA recommends the Commission deny the requested \$57 to \$63 million (depending on
17 the property purchase value) for this pipeline project.

18 **2. Non-Specific Budgets for 2016-2018**

19 CWS requests \$3,144,000 in the Non-Specific Budget to address unforeseen, unplanned,
20 and emergency projects and regulatory compliant projects. ORA's Report on Plant -
21 Common Issues presents ORA's recommended total allowance of this budget.

¹⁴⁴CWS Palos Verdes Project Justifications, p. PV PJ-415.

1 **3. 2015 Capital Budget**

2 CWS requests approximately \$15.8 million for plant additions in 2015, which consist of
3 projects authorized for 2015 in the last GRC and projects authorized from previous
4 GRCs. ORA's Report on Plant - Common Issues presents its analysis and recommended
5 2015 capital additions for Palos Verdes.

6 **D. CONCLUSION**

7 ORA's recommendations presented above have been incorporated in the calculations for
8 estimated Plant in Service shown in Table 7-1 in its Company-Wide Report, Appendix
9 RO.

Chapter 8: Plant – Westlake District

A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Westlake District.

B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral, or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 8-A** below. ORA's estimate on plant additions also reflect recommendations in its Report on Plant – Common Issues testimony regarding Pipeline Replacement Program, Meter Replacement Program, Vehicle Replacement, Non-Specific Budget, and 2015 Capital Budget. **Table 8-B** presents ORA project-specific adjustments.

Table 8-A: Capital Budget Summary – Westlake District

Westlake (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 307.5	\$ 944.4	\$ 490.4	\$ 513.3	\$ 563.9
CWS	\$ 679.9	\$ 2,831.5	\$ 1,705.6	\$ 2,228.1	\$ 1,861.3
CWS > ORA	\$ 372.5	\$ 1,887.1	\$ 1,215.2	\$ 1,714.8	\$ 1,297.4
ORA as % of CWS	45%	33%	29%	23%	33%

Table 8-B: Capital Budget Details – Westlake District

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	64064	Field - Replace ITRON Handheld	\$ -	\$ 12,962		0%
	WLK0900	Meter Replacement Program	\$ -	\$ 104,367		
Specifics Total			\$ -	\$ 117,330	\$ 117,330	0%
Non-Specifics Total			\$ 10,507	\$ 181,750	\$ 171,243	6%
Carry-Overs Total			\$ 296,944	\$ 380,869	\$ 83,925	78%
TOTAL 2015			\$ 307,451	\$ 679,949	\$ 372,498	45%

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98244	Station 011 Smokey Ridge Replace Hydropneumatic Pressure Vessel	\$ -	\$ 1,016	\$ 1,016	0%
	98271	Install new cover/roof for genset at station #1.	\$ 42,391	\$ 42,391	\$ -	100%
	98159	Replacement of pump and motor. Sta. 005-C	\$ 48,243	\$ 48,243	\$ -	100%
	98162	Replacement of pump and motor. Sta. 005-D	\$ 48,243	\$ 48,243	\$ -	100%
	98163	Replacement of pump and motor. Sta. 010-A	\$ 67,092	\$ 67,092	\$ -	100%
	98244	Station 011 Smokey Ridge Replace Hydropneumatic Pressure Vessel	\$ -	\$ 218,347	\$ 218,347	0%
	98605	Replacement of 1 control valve in Westlake. Location: 123_000_CV001	\$ 29,266	\$ 29,266	\$ -	100%
	99000	Replace flow meter Sta. 10	\$ 31,391	\$ 31,391	\$ -	100%
	99026	Install SCADA RTU regulate valves on Westlake Blvd.	\$ 49,346	\$ 49,346	\$ -	100%
	97506	Install Swing Check Valve to interconnect Zone I with Zone II C/D (at Channelford & Glastonbury) to prevent loss of supply to boosted Zone	\$ 98,003	\$ 98,003	\$ -	100%
	97518	Emergency Interconnect with the City of Thousand Oaks at Westlake Blvd and Allyson Court	\$ 221,564	\$ 443,127	\$ 221,564	50%
	97523	Install 6inch Reclaimed Water Pipeline extension to serve Triunfo	\$ -	\$ 502,935	\$ 502,935	0%
	123MRP16	The 2016 main replacement program will replace 1,538 feet of pipelines in the Westlake district at an estimated cost of \$256 per foot.	\$ 102,182	\$ 568,783	\$ 466,601	18%
	98321	Hydrant Meter Reduced Pressure Principal Assembly	\$ 11,186	\$ 11,186	\$ -	100%
	WLK0900	Meter Replacement Program	\$ 57,876	\$ 84,640	\$ 26,764	68%
	102937	Relocate Fire Hydrants for Street Widening	\$ -	\$ -	\$ -	-
	98176	District Office improvements phase 2.	\$ 3,059	\$ 3,059	\$ -	100%
	99258	Vehicle Replacements > 120,000 miles	\$ 83,042	\$ 83,042	\$ -	100%
	99420	Replace V206028 due to mechanical issues, repairs and high runtime	\$ 41,521	\$ 41,521	\$ -	100%
	98176	District Office improvements phase 2.	\$ 10,000	\$ 258,775	\$ 248,775	4%
Specifics Total			\$ 944,403	\$2,630,406	\$ 1,686,003	36%
Non-Specifics Total			\$ -	\$ 201,100	\$ 201,100	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2016			\$ 944,403	\$2,831,506	\$ 1,887,103	33%

1

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97422	Station 008 Kanan Reservoir Seismic Retrofit Scope of work limited to installation of double ball flexible joint at common inlet/outlet. Overflow and drain modifications are not	\$ -	\$ 89,240	\$ 89,240	0%
	97859	Upgrade CP system at Westlake tanks: 1-T1, 6-T1 and 9-T1	\$ 90,331	\$ 90,331	\$ -	100%
	98168	Replacement of pump and motor. Sta. 010-B	\$ 68,769	\$ 68,769	\$ -	100%
	98169	Replacement of pump and motor. Sta. 010-C	\$ 68,769	\$ 68,769	\$ -	100%
	98202	Replacement of pump and motor. Sta. 010-D	\$ 68,769	\$ 68,769	\$ -	100%
	98606	Replacement of 1 control valve in Westlake. Location: 123_000_CV002	\$ 29,998	\$ 29,998	\$ -	100%
	123MRP17	The 2017 main replacement program will replace 2,308 feet of pipelines in the Westlake district at an estimated cost of \$256 per foot.	\$ 104,530	\$ 874,883	\$ 770,353	12%
	WLK0900	Meter Replacement Program	\$ 59,242	\$ 86,756	\$ 27,514	68%
	99259	Vehicle Replacements > 120,000 miles	\$ -	\$ 122,076	\$ 122,076	0%
Specifics Total			\$ 490,408	\$1,499,591	\$ 1,009,183	33%
Non-Specifics Total			\$ -	\$ 206,000	\$ 206,000	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2017			\$ 490,408	\$1,705,591	\$ 1,215,183	29%

2

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97807	Station 002 Asphalt Replacement	\$ 60,963	\$ 60,963	\$ -	100%
	98530	Sta 007 Install Driveway at Harper Reservoir	\$ 92,228	\$ 92,228	\$ -	100%
	97500	Station 009 Notter Reservoir Seismic Retrofit Scope of work limited to installation of double ball flexible joint at common inlet/outlet. Overflow and drain modifications are not	\$ 94,732	\$ 94,732	\$ -	100%
	98203	Replacement of pump and motor. Sta. 007-C	\$ 55,270	\$ 55,270	\$ -	100%
	99182	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 420,430	\$ 420,430	0%
	123MRP18	The 2018 main replacement program will replace 2,983 feet of pipelines in the Westlake district at an estimated cost of \$256 per foot.	\$ 106,913	\$ 1,196,110	\$ 1,089,197	9%
	WLK0900	Meter Replacement Program	\$ 60,593	\$ 88,925	\$ 28,332	68%
	99259	Vehicle Replacements > 120,000 miles	\$ 42,558	\$ -	\$ (42,558)	-
Specifics Total			\$ 513,257	\$2,008,658	\$ 1,495,401	26%
Non-Specifics Total			\$ -	\$ 219,400	\$ 219,400	0%
Carry-Overs Total			\$ -	\$ -	\$ -	-
TOTAL 2018			\$ 513,257	\$2,228,058	\$ 1,714,801	23%

C. DISCUSSION

The Westlake District recorded \$2,467,600 per year in average gross plant additions for the most recent six-year period 2009-2014.¹⁴⁵ Table 8-C compares CWS's and ORA's estimates against recorded annual average gross plant additions.

Table 8-C: Capital Budget Summary vs. Recorded Expenditures– Westlake District

Westlake (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 2,467.6	100%
ORA	\$ 307.5	\$ 944.4	\$ 490.4	\$ 513.3	\$ 563.9	23%
CWS	\$ 679.9	\$ 2,831.5	\$ 1,705.6	\$ 2,228.1	\$ 1,861.3	75%

ORA presents a discussion on its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 non-specific projects (Section 2), and 2015 capital budget (Section 3) below.

¹⁴⁵ Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

1. Specific Projects

Specific projects are a category where CWS identified a specific project to spend the proposed budget in this GRC.

a. Pipeline Replacement Program (PIDs 123MRP16, 17 & 18)

CWS requests \$568,783 in 2016, \$874,883 in 2017 and \$1,196,110 in 2018 for main replacement in the Westlake District. CWS proposes to replace an annual average of approximately 2,300 feet per. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 8-D** below shows ORA's recommendations for pipeline replacement and the associated budgets in this district.

Table 8-D: Pipeline Replacement Budget –Westlake District

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	123MRP16	276	\$ 102,182	1,538	\$ 568,783
2017	123MRP17	276	\$ 104,530	2,308	\$ 874,883
2018	123MRP18	276	\$ 106,913	2,983	\$ 1,196,110

b. Meter Replacement Program (PID WLK900)

CWS requests \$84,640 in 2016, \$86,756 in 2017 and \$88,925 in 2018 to replace the Westlake district's small and large meters in accordance with the Commission GO 103A requirements. **Table 8-E** below compares CWS's requests and ORA's recommendation. ORA recommended budgets are based on detailed analysis and recommendation in its Report on Plant – Common Issues.

Table 8-E: Meter Replacement Budgets – Westlake District

District:	Westlake		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 57,876	\$ 84,640
2017	0900	\$ 59,242	\$ 86,756
2018	0900	\$ 60,593	\$ 88,925

c. Station 011 Smokey Ridge Replace Hydro Pneumatic Tank (PID 98244)

CWS proposes to replace the existing hydro pneumatic tank with a capacity of 5,428 gallons at Station 011 due to safety concerns. CWS requests \$219,364 in 2016 for the construction of this project.

According to CWS’s project justification, the objective of this project is to replace the existing tank with a higher rated tank designed to meet “current” industry standards.¹⁴⁶ Also, CWS proposes to install seismic anchors and protective liner against corrosion on the new tank. In any construction standards, the “current” standards are applicable to new constructions. The existing condition of an existing structure is “grandfathered in” meaning the construction of the existing structure was per construction standards applicable at that time. If the existing structure’s condition did not follow the construction standards of the past when it was built, it would be a violation or infraction of construction standards. Correcting the condition that violates a construction standard is not the same as “meeting current industry standards.”

Also, in its project justification, CWS claims the existing hydro-pneumatic tank’s maximum operating pressure of 150 psi combined with the existing tank’s geometry creates a safety concern. CWS provided calculations in Attachment A of the project

¹⁴⁶ CWS Westlake Project Justification, p. 206.

1 justification claiming that the existing tank would have a factor of safety (SF) of 2.54 and
2 would not meet the American Society of Mechanical Engineers (ASME)'s required SF of
3 3.¹⁴⁷ CWS also provided ASME's code table in Attachment B of the project justification
4 which shows an SF of 3 as a requirement. However, as noted above, the ASME's
5 requirement is for the new hydro-pneumatic tank construction standards and should not
6 be applied to the existing tank's condition, since it was grandfathered under the standards
7 in existence when it was built.

8 According to CWS's calculation in Attachment A, CWS assumes the material for the
9 tank is SA-455 (Carbon Steel Plate for Pressure Vessels) and used Yield Strength of
10 37,000 psi for the material. According to Attachment B, ASME code Section VIII
11 Division 2 rules, the requirement is a Design Factor (factor of safety) of 3 on tensile
12 strength of the material. However, CWS used yield strength instead in its calculations. A
13 tensile strength of steel is higher than its yield strength.¹⁴⁸ A steel plate manufacturer's
14 specifications indicate SA-455 has tensile strength of over 72,000 psi.¹⁴⁹ When the
15 TENSILE strength of 72,000 psi is used in the calculation, it results in SF of 5, which is
16 well above the requirement of ASME code Section VIII Division 2.

17 Additionally, according to its own statement from the project justification, CWS has been
18 able to operate with this hydro-pneumatic tank taken offline by utilizing the Kanan

¹⁴⁷ Factor of Safety (FoS) or Safety Factor (SF) is a design safety mechanism that considers structural capacity of a system beyond the expected load or actual load. For example, the strength requirement of SF of 3 would be the three times the strength to withstand the calculated expected load.

¹⁴⁸ A tensile strength is the maximum load a material can take before failure. Yield strength is the maximum load a material can take before deformation. Steel can take more loads past the yield strength point until it breaks (past tensile strength). If the load is not beyond the yield strength, the material will return back to its original shape. If the load is between the yield and tensile strength, the material will deform, but would not break.

¹⁴⁹ [http:// www.chapelsteel.com/pvq-sa516](http://www.chapelsteel.com/pvq-sa516)

1 Reservoir.¹⁵⁰ CWS claims that without this hydro-pneumatic tank in service, they cannot
2 perform the routine maintenance on the Kanan Reservoir.¹⁵¹ CWS's project justification
3 states the following:

4 ..., this tank has been taken out of active service until replaced. Being out of
5 service prevents the Kanan reservoir from being taken offline and therefore its
6 (Kanan's) routine maintenance has been delayed until the pressure tank is
7 replaced.

8 According to CWS's project justification statement, it is possible to operate the system
9 without the hydro-pneumatic tank. CWS's statement indicates that the hydro-pneumatic
10 tank is only needed when the Kanan reservoir is taken off line for maintenance. Not to
11 mention the fact that CWS did not provide any information that the Kanan reservoir
12 needs to be taken out of service to undergo maintenance, but CWS's project justification
13 proves the system can operate with the hydro-pneumatic tank taken offline. Since system
14 can operate without the hydro-pneumatic tank, there is no immediate need to replace the
15 hydro-pneumatic tank. Also, in that case the hydro-pneumatic tank can be taken out
16 completely. Even without the hydro-pneumatic tank, when the Kanan reservoir requires
17 maintenance in the future, CWS can do so utilizing temporary water tanks. The size of
18 the existing hydro-pneumatic tank is 5,428 gallons and CWS stated that capacity is
19 needed when Kanan reservoir undergoes maintenance. A temporary water tank in that
20 size should be readily available if necessary.

21 ORA recommends that the Commission disallow CWS's request.

¹⁵⁰ CWS Westlake Project Justification, p. 206.

¹⁵¹ Ibid.

1 *d. Emergency Interconnect with the City of Thousand Oaks at Westlake Blvd and*
2 *Allyson Court (PID 97518)*

3 CWS requests \$443,127 in 2016 for constructing an Emergency Interconnect with the
4 City of Thousand Oaks as a back up to its purchase water turnouts. In its project
5 justification, CWS states there is a need for a backup plan since all of its existing turnouts
6 serving Zone III are connected to the same Casitas Municipal Water District (CMWD)
7 feeder: Lindero Feeder.¹⁵² CWS states that the City's boundary bordering Zone III is
8 supplied by a different feeder, so constructing the proposed interconnect with the City
9 would serve as a backup supply should the Lindero Feeder become unavailable.

10 CWS stated it had received 50% reimbursement from the City when it constructed
11 interconnection project (PID 64053 from 2012 GRC) in the past and CWS expects the
12 same level of contribution from the City.¹⁵³ Also, the Agreement for Emergency and
13 Maintenance Water Supply between CWS and the City, states the following:¹⁵⁴

14 **5.2 Construction.** Cal Water shall design and construct the intertie according to
15 water industry and health standards and pursuant to drawings and specifications
16 approved by City in advance of construction. City shall reimburse Cal Water for
17 fifty percent (50%) of construction costs incurred by Cal Water.

18 CWS's cost estimate provided in the project justification does not account for the City's
19 reimbursement.

20 Thus, ORA recommends the Commission reduce the project cost to \$221,564 which is
21 50% of the requested \$443,127.

¹⁵² CWS Westlake Project Justification, p. 226.

¹⁵³ CWS Westlake Project Justification, p. 227.

¹⁵⁴ CWS Westlake Project Justification, p. 236.

1 *e. Install 6-inch Reclaimed Water Pipeline extension to serve Triunfo Community*
2 *Park (PID 97523)*

3 CWS requests \$502,935 in 2016 for installing 2,200 feet of 6-inch Reclaimed Water
4 Pipeline to Triunfo Park. CWS states this project would deliver about 30 AF per year to
5 the park, thus, saving 30 AF of potable water that is currently being supplied to the park.

6 In its project justification, CWS states that this project is proposed to help CWS meet the
7 SBx7-7 requirements.¹⁵⁵ The project justification states, however, that the Westlake
8 district would unlikely be able to meet the goal solely by the conservation programs. On
9 the contrary, according to CWS's response to ORA Data Request BYU-003, CWS will
10 be able to meet the requirement even without the conservation program.¹⁵⁶ According to
11 CWS's response, the baseline projection in 2020 for the Westlake district would be 345
12 gallons per capita daily (GPCD) whereas the 2020 GPCD target for the Westlake district
13 is 373 GPCD. That means even without taking conservation into consideration, the
14 Westlake district will be able to achieve below the daily consumption target by 2020.
15 Also according to CWS, with the existing conservation program in effect, the Westlake
16 district will achieve 330 GPCD by 2020.¹⁵⁷ At this point, CWS's justification for this
17 project becomes invalid. Moreover, the proposed recycled water project will help lower
18 the potable water consumption a tad bit by making it 328.6 GPCD by 2020.¹⁵⁸

¹⁵⁵ CWS Westlake Project Justification, p. 242.

¹⁵⁶ CWS response to ORA Data Request BYU-003, Question 3.a.

¹⁵⁷ CWS response to ORA Data Request BYU-003, Question 3.a.

¹⁵⁸ All of the GPCD numbers were provided by CWS in its response to ORA Data Request BYU-003, Question 3.a.

1 Nevertheless, Westlake District will be able to meet SBx7-7's requirement in 2020
2 without this project. Thus, this project is not needed to meet the SBx7-7's requirement
3 Additionally, according to CWS's response to ORA Data Request BYU-003, the annual
4 cost savings from this project would only be \$6,706 per year.¹⁵⁹
5 ORA recommends that the Commission disallow CWS's request.

6 *f. Relocate Fire Hydrants for Street Widening (PID 102937)*

7 The City of Thousand Oaks has cancelled the street widening project. CWS confirmed
8 the City's project cancellation in its response to ORA Data Request BYU-07 and CWS's
9 updated work paper on October 15, 2015 showed the project cost of \$774,294 has been
10 taken out of the rate base. ORA confirms that this project is cancelled.

11 *g. District Office improvements phase 2 (PID 98176)*

12 CWS requests \$261,834 in 2016 to complete the district office (a leased space) remodel
13 which CWS claims that additional work is necessary. CWS lists the additional
14 improvements in the project justification as follows:

- 15 • Update two existing restroom fixtures and finishes to ADA requirement
- 16 • Update existing light fixtures throughout the office
- 17 • CSR bullet resistant casework assembly with ergonomic accessories as per Cal
- 18 Water Standards
- 19 • Bullet resistant lobby
- 20 • New Lobby storefront
- 21 • Four card readers
- 22 • Related power and audio visual work

¹⁵⁹ CWS response to ORA Data Request BYU-003, Question 3.b.

1 *i. Update Restrooms per ADA Requirement*

2 ORA finds that the project to update the exiting restroom fixtures and finishes is not
3 needed because CWS was unable to provide convincing evidence and justification that
4 this improvement is required under ADA. When ORA requested CWS to provide
5 evidence of “ADA Requirements,” CWS’s response to ORA Data Request BYU-003
6 states the improvement is needed due to the restrooms “finishes are at the end of its
7 lifecycle.”¹⁶⁰ During its site visit, ORA staff looked at the Westlake District’s restrooms
8 and did not notice any finishes showing any signs of “end of its life cycle.”

9 *ii. Updating Lighting Fixtures*

10 CWS did not provide convincing evidence showing that it is required to replace entire
11 lighting fixtures per "current" electrical code. CWS’s response to ORA Data Request
12 BYU-003 states that the California Building code requires any alteration more than 10%
13 requires the lighting to be compliant with the current code.¹⁶¹ The only “alteration” that
14 CWS proposes for the Office Remodel Phase 2 project is to lower the lobby counter for
15 customers on wheelchairs. Also, during its site visit, ORA found the existing lighting at
16 the Westlake Office adequate.

17 *iii. Bullet Proofing per Cal Water Standards*

18 CWS could not show the need for "bullet proofing" in the neighborhood where its office
19 is located; it is only required by CWS’s "internal standards." When ORA requested CWS
20 to provide evidence to show that the bullet proofing is necessary, CWS simply stated that

¹⁶⁰ CWS response to ORA Data Request BYU-003, Question 4.a.

¹⁶¹ CWS response to ORA Data Request BYU-003, Question 4.e.

1 it is required by CWS's design standards.¹⁶² The Westlake Village area is an affluent
2 neighborhood. Nearby markets and gas stations, which handle cash, do not have bullet
3 resistant glasses. Additionally, ORA noticed a sign in front of the Westlake office
4 payment box stating "cash is not accepted." CWS's Westlake office does not need bullet
5 resistant office front.

6 *iv. New Lobby Storefront*

7 The customer window at the lobby seemed too high to accommodate the customers on
8 wheelchairs. ORA agrees with the need for the lowered counter. According to the cost
9 breakdown found in Attachment A of the project justification, Demolition was estimated
10 to be \$4,719 and the new lobby store front was estimated to be \$4,000. Considering
11 construction overhead and necessary office furniture for the lowered counter, ORA
12 recommends \$10,000 to be budgeted for CWS to remodel the store front lobby to
13 accommodate customers on wheelchairs.¹⁶³

14 *v. Four Card Readers*

15 CWS requests Card reader access to be installed at this office. When asked about the
16 need for this, CWS responded that it is required by CWS's own design standards."¹⁶⁴
17 There are only nine employees working in the office and ORA finds the request for card
18 reader access system to be unnecessary and overkill.

¹⁶² CWS's response to ORA Data Request BYU-003, Question 4.c.

¹⁶³ According to Attachment A of this project (Westlake Project Justifications, p. 251), the soft cost and direct cost combined was about 22% of the total hard costs. In ORA's adjustment, considering \$8,719 to be the total hard cost, adding 22% (\$1,918) would result in \$10,637. ORA applied approximate value of \$10,000 for the cost of the adjustment.

¹⁶⁴ CWS response to ORA's verbal question during ORA's visit to the Westlake District on August 11, 2015.

1 *vi. Power and Audio Visual Work*

2 During its site visit, ORA noticed the office already has an Audio Visual system. There
3 was a big screen LCD TV/Monitor on the wall and speaker phone system.

4 Therefore, for the above listed reasons and findings, ORA recommends that the
5 Commission only allow \$10,000 for this project.

6 *h. Replace the SCADA system server and software*

7 CWS requests \$420,430 in 2018 to replace the district's SCADA server hardware and
8 programming. This request is the Westlake District's portion of the Company-wide
9 SCADA upgrade project requested at its General Office. In accordance with ORA's
10 disallowance recommendation on the General Office SCADA project; along with ORA's
11 reasons why the district SCADA project is not needed at this time, which was discussed
12 in the ORA's Report on Plant - Common Issues, ORA recommends that the Commission
13 disallow CWS's request for the Westlake District SCADA replacement project.

14 *i. Vehicle Replacement (PIDs 99258 & 99259)*

15 CWS requests \$83,042 in 2016 and \$122,076 in 2017 to replace vehicles in the Westlake
16 district. CWS requested total of 4 vehicles to be replaced in this GRC. For reasons
17 provided in its Report on Plant – Common Issues, ORA recommends the following
18 budgets for vehicle replacements:

19 **Table 8-F: Vehicle Replacement Budgets – Westlake District**

Proposed Year	District	Project ID	Vehicle ID	CWS Request	ORA Recommendation	ORA Explanation
2016	Westlake	99258	V208074	\$ 41,521	\$ 41,521	allowed
2016	Westlake	99258	V211025	\$ 41,521	\$ 41,521	allowed
2017	Westlake	99259	V209051	\$ 79,518	-	next GRC
2017	Westlake	99259	V213036	\$ 42,558	\$ 42,558	postpone to 2018
Total:				\$ 205,118	\$ 125,600	

2. Non-Specific Budgets for 2016-2018

CWS requests \$617,800 in the Non-specific Budget to address unforeseen, unplanned, and emergency projects and regulatory compliant projects. ORA's Report on Plant - Common Issues presents ORA's recommended total disallowance of this budget.

3. 2015 Capital Budget

CWS requests approximately \$680,000 for plant additions in 2015, which consist of projects authorized for year 2015 and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents its analysis and recommended 2015 capital additions for the Westlake district.

D. CONCLUSION

ORA's recommendations presented above have been incorporated in the calculations for estimated Plant in Service shown in Table 7-1 in its Company-wide Report, Appendix RO.

1 **Chapter 9: Various Coating Replacements for Existing Tank**
2 **Infrastructure (Tank Coating)**

3 **A. INTRODUCTION**

4 This chapter presents ORA's analyses and recommendations for Various Coating
5 Replacements for Existing Tank Infrastructure (Tank Coating) for CWS's Antelope
6 Valley, Dominguez, East Los Angeles, Hermosa-Redondo and Palos Verdes Districts.

7 **B. SUMMARY OF RECOMMENDATIONS**

8 Based on ORA's review and analysis of CWS's requested Tank Coating projects, ORA
9 recommends allowance, disallowance, and adjustment where appropriate. These
10 recommendations form the basis of ORA's recommended Tank Coating expense forecast.

11 CWS requests a total of \$5,217,427 in 2016-2018 for various Tank Coating projects for
12 the districts listed above. ORA recommends \$1,539,643.

13 **C. DISCUSSION**

14 ORA reviewed CWS's tank inspection reports, especially, whether the inspection report
15 recommended Tank Coating or other repair/upgrades.¹⁶⁵ ORA recommended
16 disallowance where the inspection report did not note any recommendations. ORA
17 recommended adjustments where CWS's requested budget was above ORA's calculated
18 cost. ORA accepted CWS's requested budget when it is within the ORA's calculated
19 cost. **Table 9-A** below is a presentation of CWS's requests and ORA's
20 recommendations. ORA recommends the Commission to accept ORA's reduced budget.

¹⁶⁵ CWS's response to ORA Data Request BYU-013, Attachments Q1(a), (c1), (c2), and (c3).

Table 9-A: CWS's Requested Budget vs. ORA's Recommended Budget – Various Tank Coating Projects

PID	District	Tank Coating Project	Year	ORA Recommended	WP10D2 Cell	CWS Request	Note
97930	AV	LAN 001 - T1	2018	\$ 75,000	B14	\$ 102,400	Same size tank (LAN 001-T2) was done at \$73,862 in 2015
97600	PV	PV 037-T1	2017	\$ -	B14	\$ 2,500,000	See Palos Verdes Report
97920	PV	PV 045-T1	2017	\$ -	Not Found	\$ -	Not requested in WP, only found in DR response
97932	PV	PV 046-T1	2018	\$ 84,400	B16	\$ 84,400	
97933	PV	PV 048-T1	2018	\$ 90,425	B15	\$ 90,425	
97918	DOM	DOM 232-T1	2016	\$ 485,499	B18	\$ 676,000	5 MG, Manway
97921	DOM	DOM 203 - T3	2017	\$ 171,247	B20	\$ 171,247	3.5 MG
97922	DOM	DOM 203 - T4	2017	\$ 171,247	B19	\$ 171,247	3.5 MG
97918	DOM	DOM 279 - T1	2016	\$ -	B17	\$ 7,380	No recommendation from the inspection report
97919	DOM	DOM 279 - T2	2016	\$ -	B16	\$ 7,380	No recommendation from the inspection report
97924	ELA	ELA 061-T1	2016	\$ -	B19	\$ 199,135	Painted in 2013
97925	ELA	ELA 061-T2	2016	\$ 48,089	B20	\$ 80,000	
97927	ELA	ELA 012-T2	2017	\$ -	B21	\$ 160,000	Painted in 2013
97922	ELA	ELA 038 - T1	2016	\$ 8,673	B17	\$ 8,673	
97923	ELA	ELA 038 - T2	2016	\$ 8,673	B18	\$ 8,673	
97797	HR	HR 029-T2	2017	\$ 292,317	B13	\$ 751,730	1.5 MG, Cathodic Protection
97802	HR	HR 022-T1	2018	\$ 80,028	B16	\$ 80,028	
97793	HR	HR 023-T3	2017	\$ 24,045	B15	\$ 78,124	0.5 MG
No Justification	HR	STA. 8 Tnk. T2	2016	\$ -	B12	\$ 23,885	No insp. Report, No Justification, DR response did not show this
No Justification	HR	STA. 8 Tnk. T1	2018	\$ -	B13	\$ 16,700	No insp. Report, No Justification, DR response did not show this
Total:				\$ 1,539,643		\$ 5,217,427	

ORA calculated an average cost per million gallon (MG) size of a tank based on CWS's previous tank maintenance records provided in response to ORA Data Request BYU-013.¹⁶⁶ In the response, CWS provided tank maintenance costs from 2010 to 2015. ORA divided the recorded tank maintenance costs by the tank size in MG and averaged the value to calculate the average per MG cost. **Table 9-B** below shows ORA's calculated average costs for each item of the tank maintenance projects. These values are then multiplied by the requested tank size to produce ORA's recommended budget.

¹⁶⁶ CWS's response to ORA Data Request BYU-013, Attachment BYU-013 Q1(b).

1 **Table 9-B: ORA’s Calculated Tank Maintenance Costs per MG**

Category	Cost	Note
Cupola	\$ 6,000	each
CP System	\$ 11,875	avg
Tank Upgrade per item	\$ 5,000	for each Manway, Ladder, Overflow
Partial Interior	\$ 96,100	Avg, per MG
Complete Interior	\$ 138,872	avg, per MG, smaller than 1 MG -> 1 MG/n
Complete Interior & Exterior Roof	\$ 234,557	avg, per MG
Complete Exterior	\$ 48,089	avg, per MG

2

3 When applying the above ORA’s tank maintenance costs to the tanks that are smaller

4 than 1 MG, ORA used a percentage of the “per MG” cost depending on the size of the

5 requested tanks. ORA’s calculation sheet is attached on the next page.

Chapter 9 – Attachment: ORA's Calculation on Tank Coating Costs

CWS's response to ORA DR BYU-013, Attachment Q1(b)									
Project Info			Requested Scope and Cost Information				Notes		
PID	District	Description	Year	Total	Size	Type	Scope		
00019742	HR	Paint Int & Cupola Vents - Sta 5 T2	2010	\$ 300,717.89	3.5 MG	Welded Steel	Partial Interior (Vapor Zone) & Cupola Vents	Estimated Cupola Vent Cost = \$6,000	
00020035	HR	Paint Exterior - Sta. 27 T & Res 6	2010	\$ 369,176.41	1.0 MG	Welded Steel	Complete Exterior		
00020498	HR	Paint Int & CP Sys - Sta 9 Res 9D	2010	\$ 325,416.38	(4) 1.0 MG & (1) 2.0 MG	Welded Steel	Complete Exterior (5 Tanks) & CP System	Estimated CP System Cost = \$10,000	
00018116	PV	Paint Exterior - Sta. 46 TI Res. 12	2010	\$ 24,644.31	0.100 MG	Concrete	Complete Exterior		
No coating projects in these districts for 2011									
No coating projects in these districts for 2012									
00025551	ELA	Paint Interior & Upgrade C.P. System	2013	\$ 270,567.32	1.0 MG	Welded Steel	Complete Interior & CP Rectified	Estimated CP System Cost = \$12,500	
00027192	HR	Upgrade CP System & Paint Sta 26C	2013	\$ 485,905.81	1.5 MG	Welded Steel	Complete Interior, Exterior Roof, Roof Retrofit, and CP System	Estimated CP System Cost = \$12,500; Estimated Roof Retrofit Cost = \$75,000	
00028627	HR	Paint & CP System - Sta. 9 Res. 9C	2013	\$ 257,166.11	1.0 MG	Welded Steel	Complete Interior & CP System	Estimated CP System Cost = \$12,500	
00030507	HR	Paint interior complete, upgrade CP	2013	\$ 289,186.18	1.0 MG	Welded Steel	Complete Interior & Tank Upgrades (Manway, Ladder Section, Overflow)	Estimated Upgrade Cost = \$15,000	
00051648	HR	Paint Int Shell/Floor- Sta.26 T4	2013	\$ 167,049.99	2.0 MG	Welded Steel	Partial Interior (Immersed Zone)		
00053329	HR	Paint Interior of HR, Sta.5 T1	2013	\$ 421,991.91	3.5 MG	Welded Steel	Partial Interior (Vapor Zone)		
00061958	LEO	Paint Int. Ext. at LEO Sta. 1 T1	2013	\$ 156,631.85	0.105 MG	Welded Steel	Complete Interior & Exterior		
00095006	DOM	DOM 277-T1: Complete Int. Coating	2014	\$ 34,296.00	0.056 MG	Welded Steel	Complete Interior		
00094971	ELA	ELA 042-T2: Complete Int & Partial Ext.	2014	\$ 553,477.75	3.0 MG	Welded Steel	Complete Interior & Exterior Roof		
00094972	ELA	ELA 055-T1: Complete Int. Coating	2014	\$ 128,735.16	0.500 MG	Welded Steel	Complete Interior		
00095010	PV	PV 023-T2: Complete Int. & Partial Ext.	2014	\$ 625,723.88	3.0 MG	Welded Steel	Complete Interior & Exterior Roof		
00095014	PV	PV 050-T1: Complete Int. Coating	2014	\$ 53,792.52	0.100 MG	Concrete	Complete Interior		
00095015	LAN	LAN 001-T2: Complete Int. Coating	2015	\$ 73,862.10	0.150 MG	Welded Steel	Complete Interior		
00094980	ELA	ELA 010-T2: Complete Int. Coating	2015	\$ 139,029.23	0.500 MG	Welded Steel	Complete Interior		
00095008	DOM	DOM 203-T1: Paint Ext. & Partial Int.	2015	\$ 388,418.93	3.5 MG	Welded Steel	Partial Interior & Complete Exterior		
00102258	DOM	DOM 203-T3: Complete Ext. Coating	2015	\$ 64,206.28	3.5 MG	Welded Steel	Complete Exterior		
00095009	DOM	DOM 297-T1: Complete Ext. Coating	2015	\$ 33,910.57	0.050 MG	Bolted Steel	Complete Exterior		
Average Cost Calculation (per MG)									
		Cupola		\$ 6,000.00			Average per MG Cost Calculation		
		CP System		\$ 11,875.00	avg				
		Tank Upgrade per Item		\$ 5,000.00	For each Manway, Ladder, Overflow				
		Partial Interior		\$ 96,099.74	Avg. per MG		Partial Interior	84,205.11 per MG	
		Complete Interior		\$ 138,872.23	Avg. per MG, smaller than 1 MG = 1 MG		Complete Interior	83,525.00	
		Complete Interior & Exterior Roof		\$ 234,557.03	avg. per MG		Complete Interior & Exterior Roof	120,569.12	
		Complete Exterior		\$ 48,089.15	avg. per MG		Complete Interior	96,099.74 Avg. per MG	
ORA Recommendation									
PID	District	Tank Coating Project	Year	Recommended	WP10D2 Cell	CWS Request			
97930	AV	Size)	2018	\$ 75,000.00	B14	\$ 102,400.00			
97600	PV	PV 037-T1	2017	\$ -	B14	\$ 2,500,000.00			
97920	PV	PV 045-T1 (Not found in the Workpaer WP10D2)	2017	\$ -	Not Found	\$ -			
97932	PV	PV 046-T1	2018	\$ 84,400.00	B15	\$ 84,400.00			
97933	PV	PV 048-T1	2018	\$ 90,425.00	B16	\$ 90,425.00			
97918	DOM	DOM 232-T1	2016	\$ 485,498.71	B18	\$ 676,000.00	Complete Interior and Exterior Roof		
97921	DOM	DOM 203 - T3	2017	\$ 171,247.00	B20	\$ 171,247.00	310,603.87		
97922	DOM	DOM 203 - T4	2017	\$ 171,247.00	B19	\$ 171,247.00	184,492.58		
97918	DOM	DOM 279 - T1	2016	\$ -	B17	\$ 7,380.00	208,574.63		
97919	DOM	DOM 279 - T2	2016	\$ -	B16	\$ 7,380.00	234,557.03 avg. per MG		
97924	ELA	ELA 061-T1	2016	\$ -	B19	\$ 199,134.80	Complete Exterior		
97925	ELA	ELA 061-T2	2016	\$ 48,089.15	B20	\$ 80,000.00	369,176.41 Too high for 1 MG tank		
97927	ELA	ELA 012-T2	2017	\$ -	B21	\$ 160,000.00	52,569.40		
97922	ELA	ELA 038 - T1	2016	\$ 8,673.00	B17	\$ 8,673.00	24,644.31		
97923	ELA	ELA 038 - T2	2016	\$ 8,673.00	B18	\$ 8,673.00	18,344.65		
97797	HR	HR 029-T2	2017	\$ 292,317.07	B13	\$ 751,730.00	33,910.57		
97802	HR	HR 022-T1	2018	\$ 80,028.00	B16	\$ 80,028.00	310,976.84		
97793	HR	HR 023-T3	2017	\$ 24,044.58	B15	\$ 78,124.00	48,089.15 avg. per MG		
No Justific	HR	STA. 8 Tnk. T2 (No justification, DR reponse did not show this)	2016	\$ -	B12	\$ 23,885.00			
No Justific	HR	STA. 8 Tnk. T1 (No justification, DR reponse did not show this)	2018	\$ -	B13	\$ 16,700.00			

CHAPTER 10: East Los Angeles Memorandum Account

A. INTRODUCTION

CWS requests amortization of the amount that has been tracked in the East Los Angeles Memorandum Account (ELA MA) and elimination of the account.

B. SUMMARY OF RECOMMENDATIONS

ORA recommends CWS's request to amortize the amount tracked in the ELA MA be denied.

C. DISCUSSION

1. Preliminary Statement AQ – East Los Angeles Memo Account (“ELA MA”)

Background

In 2009 GRC, the Commission authorized CWS several advice letter projects to purchase land and construct groundwater wells in the East Los Angeles District. CWS purchased property at 2000 Tubeway Avenue (Tubeway Property) for \$6,822,667 and recorded it as a Non-Specific Project 50350 in December 2011 instead of filing an advice letter. The Tubeway Property had an existing warehouse building formerly operated by Grainger, Inc. CWS explained the Tubeway Property had enough space for developing two ground wells and a centralized treatment facility. Thus, CWS claims that it made a decision to purchase the Tubeway Property in lieu of the advice letter projects. Purchasing a warehouse building was never in the scope of the Commission authorization since it only authorized purchasing land for new wells. CWS then completed some improvements to the building (Phase 1 Building Improvement Project, PID 57791 at \$1.235 million) and moved its customer service operations. Both (Phase 1 Building Improvement and the customer service center move) were unauthorized projects. Before the move, CWS was paying about \$50,000 per year in rent for the customer service center. In CWS's last GRC, ORA opposed the building purchase and the customer service center move based on prudence. ORA settled with CWS that 50% of the \$6.8 million (\$3,411,313 to be

1 exact) project cost to be included in rate base for the land purchase of the two new
2 groundwater wells and a centralized treatment facility. The remaining balance of the
3 \$6.8 million and the Phase 1 Building Improvement Project (\$1.235 million) was to be
4 tracked in a memorandum account along with the carrying costs from the two projects.¹⁶⁷
5 Additionally, the Settlement Agreement specified that “ORA’s agreement regarding the
6 establishment of this memorandum account does not constitute its support for cost
7 recovery of the tracked investment.”¹⁶⁸

8 *a. CWS’s Request on Amortization of the Accrued Carrying Costs in ELA MA*

9 CWS’s General Report states that in the Capital Project Justification Report for the East
10 Los Angeles District, it provides explanation and support for why the projects in ELA
11 MA should be allowed into rate base in this GRC.¹⁶⁹ However, the project justification
12 only provides the need for the Phase 2 of the building improvement for CWS to move its
13 Field Operations Center to the Tubeway Property.

14 According to the Resolution 2 of the Settlement Agreement on the Tubeway Property, it
15 was agreed:

16 The costs of these two building improvement projects and the excluded portion of
17 the Tubeway Property purchase are attributable to the relocation of the customer
18 service and field operations and will need to be **FULLY JUSTIFIED** if CWS
19 decides to seek cost recovery in future GRC. **[Emphasis added]**

20 Instead of providing a full justification, CWS makes an unexplained adjustment to the
21 Utility Plant in Service work paper (Table8UPIS) of the East Los Angeles District (ELA).

¹⁶⁷ According to the Settlement Agreement, Attachment 5, p. 8, carrying costs comprise of Rate of Return, Ad Valorem Taxes, and Depreciation.

¹⁶⁸ Settlement Agreement, p. 229, Resolution 4.

¹⁶⁹ CWS General Report, p. 36.

Table8UPIS shows an adjustment of \$2,723,100 in 2015 (Cell I13). Cell I13 is linked to the Cell J16 of the work paper WP8A2.¹⁷⁰ Then it is linked to Cell J23 of WP8A2 which is CWS's adjustment to Tubeway Purchase (\$2,757,600). The value in Cell J23 is a hand entered number. Below is a capture of WP8A2:

Table 10-A: CWS's Tubeway Adjustment (WP8A2)

EAST LOS ANGELES DISTRICT											
2015 GENERAL RATE CASE											
Adjustments to Plant in Service											
(DOLLARS IN THOUSANDS)											
I T E M	2009	2010	2011	2012	2013	2014	Calendar Year				
							2015	2016	2017	2018	
1. ADJUSTMENT FOR HISTORICAL CAP INT	(\$52.0)	(\$49.1)	(\$46.1)	(\$43.2)	(\$40.3)	(\$37.4)	(\$34.4)	(\$31.5)	(\$28.6)	(\$25.7)	
2. Adjustment to Tubeway Purchase							\$2,757.6				
16 TOTAL ADJUSTMENT	(\$52.0)	(\$49.1)	(\$46.1)	(\$43.2)	(\$40.3)	(\$37.4)	\$2,723.1	(\$31.5)	(\$28.6)	(\$25.7)	
Description of Adjustments:											
2. Transfer cost of Tubeway (Property Held for Future Use - Account 110002)											
23 Gross Plant							\$2,757.6				
Accumulated Reserve (Non-depreciable)							\$0.0				
Depreciation Expense							\$0.0	\$0.0	\$0.0	\$0.0	

ELA work paper WP8A2a shows calculations for the accrued carrying cost of the Tubeway Property tracked in ELA MA. The calculated total carrying cost on the work paper was \$1,627,008. The Settlement Agreement was specific that the ELA MA would not get an automatic cost recovery of the carrying costs.¹⁷¹ It was also specific about the request for cost recovery of the property purchase and the building improvement should be based on a fully justified need for the project.

¹⁷⁰ According to the calculation on WP8A2, \$2,723,100 is calculated by subtracting the Historical Capital Interest Adjustment for 2015 (\$34,400) from the Tubeway Purchase Adjustment (\$2,757,600).

¹⁷¹ Settlement Agreement, p. 229.

1 The carrying cost calculation on WP8A2a labels the following as “total capital carrying
2 cost.”

3 **Table 10-B: CWS’s Mislabeled Carrying Cost**

PID 57791 Phase 1 Building Improvement	TOTAL CAPITAL COST AT CLOSING	APPROVED COSTS IN D.14-08-011	Carrying Cost
103061 - Land	\$3,411,313	\$3,411,313	\$3,411,313
103710 - Struct & Improve Genl Plnt	1,148,713	\$1,132,436	\$1,132,436
103711 - Driveway Pavement-Gen Plant	89,494	\$88,226	\$88,226
103720 - Office Furn & Equip-Gen Plnt	4,186	\$4,127	\$4,127
103721 - Office-Elec. Equip/Computers	10,675	\$10,523	\$10,523
4 TOTAL CAPITAL CARRYING COST	\$4,664,381	\$4,646,626	\$4,646,626

5 However, these costs are carried or tracked capital costs in the ELA MA, not the
6 “carrying costs.” Carryings costs are calculated based on this capital cost. Below is the
7 capture of CWS’s carrying cost calculation on work paper WP8A2a:

Table 10-C: CWS's Carrying Cost Calculation (WP8A2a)

EAST LOS ANGELES DISTRICT				
MEMO ACCOUNT FOR TUBEWAY PROPERTY AND IMPROVEMENTS				
PIDs 50350 AND 57791				
		TOTAL CAPITAL COST AT CLOSING	APPROVED COSTS IN D.14-08-011	Carrying Cost
A1)	PID 57791 Phase 1 Building Improvement			
A2)	103061 - Land	\$3,411,313	\$3,411,313	\$3,411,313
	103710 - Struct & Improve Genl Plnt	1,148,713	\$1,132,436	\$1,132,436
	103711 - Driveway Pavement-Gen Plant	89,494	\$88,226	\$88,226
	103720 - Office Furn & Equip-Gen Plnt	4,186	\$4,127	\$4,127
	103721 - Office-Elec. Equip/Computers	10,675	\$10,523	\$10,523
	TOTAL CAPITAL CARRYING COST	\$4,664,381	\$4,646,626	\$4,646,626
A3)	TOTAL CAPITAL COST			\$4,646,626
A4)	BEGINNING YEAR PLANT			\$4,646,626
B1)	ANNUAL DEPRECIATION	PLANT		
B2)	103061 - Land	0%		\$0
	103710 - Struct & Improve Genl Plnt	2.52%		\$28,537
	103711 - Driveway Pavement-Gen Plant	2.75%		\$2,426
	103720 - Office Furn & Equip-Gen Plnt	3.10%		\$128
	103721 - Office-Elec. Equip/Computers	3.58%		\$377
B3)	TOTAL ANNUAL DEPRECIATION EXPENSE (2014 - 2016)			\$92,889
C)	RATE BASE ADJUSTMENT \$			\$4,646,626
D)	CURRENT ADOPTED RATE OF RETURN (D. 09-05-019)			7.94%
E)	REVENUE REQUIREMENT FOR RATE BASE ADJUSTMENT (C * D)			\$1,106,826
F)	NET TO GROSS MULTIPLIER (Adopted in D.14-08-011)			1.37032
G)	GROSS REVENUE REQUIREMENT (E * F)			\$1,516,711
H)	EXPENSE CHANGES			
H1)	ANNUAL DEPRECIATION			\$92,889
H2)	IMPUTED RENT EXPENSE (\$52,500 ANNUALLY)			-157,500
H3)	ADOPTED AD VALOREM TAX RATE (APPENDIX F)			1.24%
H4)	ADOPTED AD VALOREM TAXES (A4 * H2 * 3)			\$172,985
H5)	NET TO GROSS EXCL INCOME TAXES			1.01775
I)	$((H1 + H2 + H4) * H4) * 3$			\$110,297
J)	TOTAL CARRYING COST (G + I)			\$1,627,008
	ADOPTED REVENUE (FROM TABLE 1ACOMP)			\$33,313,343
	Requested % increase			4.88%

1 The above carrying cost was calculated for the period of January 1 2014 through
2 December 31, 2016. CWS's adjustment for ELA MA was made on Table8UPIS for the
3 amount of \$2,723,100 in 2015.¹⁷²

4 As it is shown above on **Table 10-A**, CWS requests inclusion of Tubeway Adjustment in
5 the amount of \$2,757,600 in the Utility Plant in Service. Information found on the **Table**
6 **10-A** (work paper WP8A2) states the Tubeway is booked as property held for future use.
7 From this information, ORA found that CWS is not requesting to include the Tubeway
8 Building purchase cost (Settled amount of \$3,411,313). Then the Tubeway Adjustment
9 (\$2,757,600) is the sum of Tubeway Phase 1 Building Improvement and the Carrying
10 Cost calculated above.¹⁷³ This makes sense since ORA witnessed, during its site visit to
11 the Tubeway building, that more than half of the building space was not being used.
12 CWS couldn't request for the cost of the building that is not being used.

13 CWS failed to provide further information other than the requested adjustment is made
14 on the work paper. Also, CWS did not comply with the settlement by failed to provide
15 the prudence of the Tubeway Property (building) purchase and the need for the Phase 1
16 building improvement. Especially, CWS's previous customer service center was on a
17 leased property for \$52,500 per year and the building purchase and improvement cost
18 \$4,664,381 which already resulted in \$1,627,008 as carrying cost in just three years.

¹⁷² Tubeway Adjustment (\$2,757,600 minus \$34,500 of Historical Capital Interest for 2015).

¹⁷³ On the Carrying Cost calculation sheet (**Table 10-C**), CWS reports Approved Cost of the Phase 1 as \$1,132,436 (PID 103710). Rounding this to the thousands would be \$1,132,000. Plus the calculated Carrying Cost (line J, rounded to the thousands) of \$1,627,000 would result in \$2,759,000 which is very close to CWS's "hand entered" amount of \$2,757,600.

1 CWS’s project justification for Phase 2, which ORA recommends disallowance in this
2 GRC, states the following in the beginning two paragraphs:¹⁷⁴

3 “Cal Water owns a property located at 2000 S. Tubeway Avenue...”

4 “The Tubeway property currently contains the district Customer Center...”

5 The project justification begins to reason that it owns the Tubeway building (which was
6 not an authorized purchase); the building already has the Customer Service Center moved
7 in (which was not authorized); and the Tubeway building’s extra space can be used by its
8 Field Operation Center (it requires moving the current Field Operations Center to the
9 Tubeway). This is not a full justification for the Tubeway Building Purchase. It was
10 agreed in the settlement that CWS was to provide a full justification should it pursue cost
11 recovery of the property (Tubeway building) purchase and improvement. Instead of
12 providing the “agreed” full justification, CWS’s project justification describes it as
13 already a done deal, which it is not. As it was mentioned earlier, CWS’s Customer
14 Service Center used to be on a leased space for \$52,500 per year before moving to the
15 Tubeway building. If the ELA MA is to be amortized, the revenue requirement of the
16 Tubeway project (building purchase and improvement) would be \$542,333 per year.¹⁷⁵
17 That is more than 10 times of the lease amount it used to pay for the old Customer Center.

18 CWS failed comply with the Settlement Agreement by not meeting its burden of proof to
19 fully justify the Tubeway building purchase and the building improvement was
20 reasonable. Also, the **UNAUTHORIZED** Tubeway building purchase and improvement
21 for the Customer Service Center move is not beneficial to the ratepayers at all.

22 **[Emphasis added]** Therefore, CWS’s request to amortize the ELA MA should be

¹⁷⁴ CWS East Los Angeles Project Justifications, p. ELA PJ-335.

¹⁷⁵ The calculated Carrying Cost (\$1,627,000) was over the period of three years. Dividing this by 3 years would result in an estimate of annual revenue requirement (\$542,333).

denied. Accordingly, ELA work paper, Table8UPIS, Cell I13 should be corrected to (-\$34,400) by making the Cell J23 of the work paper WP8A2 zero.¹⁷⁶

D. CONCLUSION

ORA recommends the following:

1. CWS's request for amortizing ELA MA should be denied until it complies with the Settlement Agreement or fully justifying the reasonableness of the Tubeway building purchase.
2. CWS's adjustment made in the work paper regarding ELA MA (or Tubeway Property Project) should be removed from work paper WP8A2, Cell J23. (This change will flow through to Cell I13 of Table8UPIS).

¹⁷⁶ This adjustment is to remove \$2,757,600 out of the Utility Plant in Service which will lower the rate base.

1 **CHAPTER 11: SPECIAL REQUEST #7- Inclusion of Construction**
2 **Work in Progress (CWIP) in Rate Base**

3 **A. INTRODUCTION**

4 CWS proposes to include the estimated Construction Work in Progress (CWIP) balances
5 (Account 100-3) in the rate base for test years (2017 and 2018). In previous GRCs, CWS
6 accrued monthly interest for each capital project and capitalized the accrued interest
7 along with the project cost to be included in rate base after the project became ready for
8 service. CWS states that the inclusion of the estimated CWIP balance in the rate base
9 will bring CWS's GRC filing consistent with other water utilities' filings.¹⁷⁷ Also, CWS
10 states CWIP inclusion in the rate base will avoid issues of capitalized interest and
11 construction estimates are included in the rate base together for certain projects.¹⁷⁸

12 **B. SUMMARY OF RECOMMENDATIONS**

13 ORA recommends CWS's request of including CWIP in rate base be rejected for reasons
14 discussed below.

15 **C. DISCUSSION**

16 According to CWS, the company has been accruing interest monthly on the balance of
17 work orders until the project is ready for service.¹⁷⁹ This interest is then capitalized and
18 included with the total project costs. When the project is completed and put in service, it

¹⁷⁷ CWS direct testimony of Stan Ferraro, page 143.

¹⁷⁸ CWS direct testimony of Stan Ferraro, page 144.

¹⁷⁹ CWS direct testimony of Stan Ferraro, page 142, lines 16-17.

1 is placed in the company's rate base, earns the authorized rate of return, and is
2 depreciated over the life of the asset.

3 In the current GRC, CWS proposes instead to include the estimate of CWIP balances
4 (Account 100-3) in rate base for test years (2017-2018). For those projects to be
5 completed and placed in rate base by December 31, 2016, CWS proposes to keep
6 accruing capitalized interest for the projects.¹⁸⁰ CWS states that no interest will be
7 accrued on capital projects that begin after December 31, 2016.¹⁸¹

8 According to CWS, the company claims that it had included CWIP in rate base prior to
9 1990s; however, due to the Internal Revenue Service's (IRS) requirement on capitalizing
10 interests, CWS had to make adjustments to the CWIP to reflect the IRS requirements.
11 CWS states developing an equivalent rate base amount to adjust CWIP for capitalized
12 interest became pointless.¹⁸² Also, CWS faced technical issues in its mainframe based
13 accounting system that could not handle the complex calculations to make adjustments.
14 Thus, CWS stopped including CWIP in rate base.¹⁸³

15 CWS's proposed request sprung from the issues argued in 2012 GRC, where ORA found
16 that certain capital projects had both capitalized interest charges and the estimated project
17 cost were included in rate base at the same time. CWS hopes that, by including CWIP in
18 rate base, the concerns with how it applied capitalized interest would be avoided.¹⁸⁴

¹⁸⁰ CWS direct testimony of Stan Ferraro, page 142, lines 16-17.

¹⁸¹ CWS direct testimony of Stan Ferraro, page 142, lines 30-31.

¹⁸² CWS direct testimony of Stan Ferraro, page 143, lines 23-28.

¹⁸³ CWS direct testimony of Stan Ferraro, page 143, lines 30-31.

¹⁸⁴ CWS direct testimony of Stan Ferraro, page 144, Lines 5-7.

1 CWS used a 13-month weighted average balance of CWIP excluding capitalized interest
2 as of December 31, 2014 as a basis for estimating the test year CWIP balance.¹⁸⁵ CWS
3 provides the recorded CWIP balances from 2009 to 2014 and calculates the average
4 CWIP balance for each of the recorded years in its work papers.

5 An example of CWS's CWIP proposal is shown in the table below, which is an excerpt
6 from CWS's General Office work paper.

¹⁸⁵ CWS direct testimony of Stan Ferraro, page 142, lines 18-19.

1

Table 11-A: CWIP Balance and Capitalized Interest Estimate¹⁸⁶

			Recorded				
I T E M		2009	2010	2011	2012	2013	2014
12-MONTH WEIGHTED AVERAGE	\$	7,928.2	\$ 10,631.2	\$ 14,813.7	\$ 10,996.7	\$ 16,818.1	\$ 14,713.4
LESS CAPITALIZED INTEREST	\$	(33.3)	\$ (28.9)	\$ (208.5)	\$ (1.5)	\$ (8.0)	\$ (22.5)
CWIP BALANCE (Net of Cap Interest)	\$	7,894.9	\$ 10,602.3	\$ 14,605.2	\$ 10,995.2	\$ 16,810.2	\$ 14,690.8
***Forecasting methodology - 5-year average							
MDR WORKPAPER - GO PLANTS A.1							
RECORDED CWIP							
Sum of Total Amt		Year					
Account	Period	2,009	2,010	2,011	2,012	2,013	2,014
103000	0	4,990,073.2	7,751,417.9	11,487,472.7	4,823,664.7	17,867,989.0	13,495,885.9
	1	5,437,752.7	7,350,212.6	12,478,571.2	5,525,700.7	18,447,560.4	14,294,679.2
	2	6,217,495.0	7,644,904.5	13,709,901.1	5,648,583.8	18,232,097.5	14,420,149.3
	3	6,576,311.9	8,394,989.0	14,270,875.8	6,229,476.8	18,718,773.3	14,084,643.7
	4	6,945,432.5	8,950,023.6	14,744,434.9	7,177,361.7	19,181,626.8	14,340,143.3
	5	7,301,936.4	8,703,377.2	14,107,107.3	7,408,644.7	17,202,787.3	15,604,831.9
	6	8,739,726.0	10,148,375.4	16,464,241.0	7,413,382.8	16,323,116.8	16,371,183.0
	7	9,286,859.7	11,433,912.6	15,953,354.8	13,504,429.6	16,436,860.8	12,711,381.2
	8	10,740,001.6	12,424,785.4	17,067,907.1	15,272,633.8	14,950,087.4	14,291,250.4
	9	8,827,535.4	13,311,726.7	17,228,767.4	16,987,636.0	15,393,395.6	14,461,353.9
	10	9,014,487.0	14,753,018.5	16,842,557.2	18,008,274.9	15,499,413.5	15,843,085.0
	11	9,697,709.7	14,839,879.3	16,741,189.3	17,425,315.0	15,749,890.2	16,052,523.2
12	7,716,780.8	11,487,472.7	4,823,664.7	17,895,425.6	13,495,885.9	14,674,993.2	
Grand Total		7,716,780.8	11,467,869.6	4,696,631.2	17,867,989.0	13,495,885.9	14,674,993.2
		7,928,222.9	10,631,220.8	14,813,706.3	10,996,748.7	16,818,128.9	14,713,388.6
CAPITALIZED INTEREST							
Sum of Amount		Year					
Account	Journal ID	2,009	2,010	2,011	2,012	2,013	2,014
103000	65	(1,214.80)	(4.72)	(351.96)	(5,904.43)	2,466.94	(2,822.33)
	65CAPINT	34,494.03	28,917.05	208,870.24	7,453.48	5,483.92	25,371.83
103000 Total		33,279.23	28,912.33	208,518.28	1,549.05	7,950.86	22,549.50
Grand Total		33,279.23	28,912.33	208,518.28	1,549.05	7,950.86	22,549.50
		33,279.23	28,912.33	208,518.28	1,549.05	7,950.86	22,549.50
		33,279.23	28,912.33	208,518.28	1,549.05	7,950.86	22,549.50

2

3 From the table above, using 2009 as an example, the capitalized interest is \$33,279. If
4 CWS includes the CWIP in the rate base, the revenue requirement for those projects that
5 are included in CWIP will far exceed the amount of capitalized interests. Consequently,

¹⁸⁶ CWS GO work paper Table 8B CWIP.

1 ratepayers will be paying \$648,732¹⁸⁷ or 20 times more in rates. Similarly, capitalized
2 interests are far less than the grossed up needed in years 2010 to 2014. The ratepayers
3 will be better off if CWS continues to include capitalized interest in its capital budget.
4 Therefore, ORA recommends the Commission to reject CWS's request to include CWIP.

¹⁸⁷ $\$684,732 = \$7,894,900 \times 0.794$ (rate of return) $\times 1.0349$ (gross up)